SOUTH DEALER ISSUE
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Year of Progress Reviewed at First Annual Meeting of National Plant Food Institute

WHITE SULPHUR SPRINGS, W. VA.—An unusually high-grade formal program, ideal weather for informal activities and a record-breaking attendance marked the annual meeting of the National Plant Food Institute at the Greenbrier here June 10-13.

The well-placed business sessions ranged in topics from what influences farmers to buy to a glimpse at the problems of current U.S. international relations.

The meeting, which was attended by more than 1,100 persons, also provided a forum for a report on accomplishments of the Institute, which was organized a year ago by a consolidation of the National Fertilizer Assn. and the American Plant Food Council. (See story on this page).

A near spectacular presentation was one on time lapse photography, by John Ott, an international authority on the subject. That, along with a discussion by two rural sociologists on factors affecting farmers' decisions to buy, gave Institute members a look at two new tools with broad potential for use in fertilizer research, sales and marketing.

Dr. J. M. Bohlen and Dr. G. M. Beal, associate professors of rural sociology at Iowa State College, Ames, told the convention that "most of the research studies indicate that the most important source of information that influences farmers to start using fertilizer was other farmers" and that the "mass media ranks next in importance."

They presented a visual demonstration on the subject of "Who Influences the Farmer."

Dr. Bohlen and Dr. Beal pointed out that "the majority of the farmers say they would go to the agricultural agencies, mainly the colleges, to get information about using a new fertilizer that was described as relatively low cost and very effective in increasing crop yields."

In discussing the subject of how farm people accept new ideas, they outlined the "diffusion process and the stages through which the individual goes in learning about and adopting or disregarding a new idea or practice as follows: (1) awareness, (2) information, (3) application, (4) trial and (5) adoption.

"People seem to use different sources of information at the different stages," they said. "Because of dozens of social, psychological, economic and other factors, individuals react differently to new ideas. The research identifies six classes of individuals that appear in the sequence. They are: the innovators, the early adopters, informal leaders, majority, later adopters and non-adopters."

Dr. Bohlen and Dr. Beal said that this "informal leader is looked up to by the majority in their neighborhoods as the fellows to see for advice and information on farming," adding that "they aren't necessarily innovators or early adopters, but they do adopt ideas ahead of the majority.

"In general characteristics they are much like the majority, but they are expected to take initiative within their groups. These folks seem to be one of the keys in the process. They are the ones identified by their friends and neighbors as those whose judgments are respected and sought, although they don't think of them as their leaders. In the time sequence, the adoption rates in many cases jump quickly after the informal leaders take up an idea or practice."

Glenn Fouche, president of the Stayform Co., Chicago, in a talk on "Dramatize Your Selling," said that "when conditions are not as we would like them, we sometimes blame vague conditions—vague personnel—

(Continued on page 20)

★ ★ ★

Institute Has Given the Fertilizer Industry A Stronger Voice, Leaders Tell Convention

WHITE SULPHUR SPRINGS, W. VA.—Progress of the National Plant Food Institute in its first year of existence and some of its aims for the coming years were outlined here June 11 at the first annual meeting of the Institute.

Members heard progress reports on the organization from Joseph A. Howell, Virginia-Carolina Chemical Corp., Richmond, president, and Dr. Russell Coleman, executive vice president, Washington, D.C.

Mr. Howell was not able to attend the convention, and his statement was read by Ralph B. Douglass, Smith-Douglass Co., Norfolk, member of the board of the Institute.

In his statement, Mr. Howell said that the consolidation of the former two national fertilizer organizations into the Institute has given the industry "a stronger voice, a coordinated organization, a competent staff, and practical programs designed to give our industry greater prestige and to focus greater attention on the importance of our products and their contributions toward building a stronger national economy.

"We do not have to indulge in flattery when we say that the predecessor organizations of the National Plant Food Institute warmly were received around the council tables of our agricultural leaders. More important, that acceptability is still enjoyed by our Institute.

"But, our first anniversary has even greater significance in terms of strengthening the position of the fertilizer industry among those organizations and dedicated people, working harmoniously and effectively, for an improved economic position for farmers."

Mr. Howell's statement declared that there was relatively little duplication of effort in the two predecessor organizations of the Institute. Still, he said, the Institute is given more opportunities, more assignments and greater challenges as one organization than when there were two trade associations.

In his statement Mr. Howell called

(Continued on page 21)

ICA to Conduct Study of Fertilizer Assistance to Korea

WASHINGTON—The International Cooperation Administration is preparing to make a thorough study of its fertilizer assistance to Korea.

The U.S. has been providing Korea with about $50 million worth of chemical fertilizers a year, pending the establishment of a South Korean fertilizer manufacturing industry to which the U.S. is contributing some $40 million.

The fertilizer program is to be studied during the summer by five American experts who will make recommendations for the guidance of ICA. These recommendations are expected to form the basis of discussions with the ROK government on this subject. The American experts will go to Korea in July and remain about two months. This group will analyze Korea's fertilizer requirements and the system of procurement and distribution from the agricultural standpoint.

The fertilizer consultant team is now being recruited with the aid of the U.S. Department of Agriculture and the National Plant Food Institute. Team members are to be borrowed from the fertilizer industry, state agriculture experiment stations and the U.S. Department of Agriculture.

Fertilizer imports to Korea constitute the largest single item provided to any country by ICA. This fiscal year ICA is financing $57 million worth of chemical fertilizers for

(Continued on page 5)

New Attack Against Gypsy Moth Begins In New York, New Jersey, Pennsylvania

WASHINGTON—Intensive control measures against the gypsy moth, a serious forest and shade-tree pest, are now under way in parts of New York, New Jersey, and Pennsylvania, the U.S. Department of Agriculture announces.

Through the joint efforts of USDA's Agricultural Research Service and the states of New Jersey, New York, and Pennsylvania, some 500,000 acres in a 90-mile strip will be sprayed from the air with DDT to eliminate the insect. The strip extends about five miles on either side of the New York-New Jersey border and continues into Pike County, Pa., and the adjacent area of New York. It reaches north on the New York side of the Delaware River into Sullivan County, N.Y. The strip being sprayed constitutes a protective border along the southwestern edge of the area newly infested by the gypsy moth during the past two years.

Congress has appropriated more than $300,000 for USDA's part in combating the moth along the strip. In addition, cooperative work is continuing in central and eastern New England, where the pest has been found for many years, and a spot infestation near Lansing, Mich., was sprayed earlier this year.

The small, creamy-white gypsy moth has destroyed millions of board feet of valuable timber in the Northeast, and its intangible damage in defoliating and destroying shade trees in yards and recreation areas and on watersheds is beyond estimation.

Commercial aerial-spraying companies have been awarded contracts to complete the job by June 30, since gypsy-moth eggs are now hatching into leaf-eating larvae. Aircraft and ground personnel of USDA's Plant Pest Control Branch supervise application of the insecticide.

★

National Plant Food Institute Officers Named

WHITE SULPHUR SPRINGS, W. VA.—Edwin Pate, Dixie Guano Co., Inc., Laurinburg, N.C., was elected chairman of the board of directors, and Charles T. Prindeville, Swift & Co., Chicago, was elected president of the National Plant Food Institute at the institute's annual meeting here last week.

Other officers of the institute, all from Washington, all reelected, are Paul T. Truitt and Dr. Russell Cole-

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BOOSTS YIELDS

COLLEGE STATION, TEXAS—Carlton County Agent Edward Becker reports that oats and pea silage yields jumped from 5.5 tons per acre on unfertilized check strips to 13 tons where manure and enough of a complete commercial fertilizer had been put on.

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Events Announced For S.W. Fertilizer Meeting July 18-20

GALVESTON, TEXAS—Program details for the Southwestern Fertilizer Conference & Grade Hearing which will be held July 18-20 at the Buccaneer Hotel, Galveston, Texas, have been announced.

A social hour from 6:30-8:30 p.m. is planned for July 18. Stanley Hackett, Dixie Fertilizer Co., will preside at opening sessions July 19. Speakers in the morning of that day will include B. W. Threadgill, Technical Service, Memphis; Dr. Russell Coleman, National Plant Food Institute, and Dr. Arthur A. Smith, economist and vice president, First National Bank, Dallas. J. D. Dawson, Fidelity Chemical Corp., will also appear on the program.

The afternoon and evening of July 19 will be devoted to golf and social events.

At 9:30 a.m. July 20 the annual fertilizer grade hearing will commence with representatives from control offices of Arkansas, Louisiana, New Mexico, Oklahoma and Texas expected to attend.

Among those on the program planning committee are Mr. Hackett; Mr. Dawson; W. S. Tyler, Longhorn Construction Co.; Dr. J. F. Fudge, Texas state chemist; J. C. Powledge, National Hotel Co.; Harold Trammell, Farmers Fertilizer Co. and Jack Lindsey, potash division, International Minerals & Chemical Corp.

Davison Completes Plant Improvements

BALTIMORE—An improvement and expansion program affecting three of the fertilizer plants of the Davison Chemical Co., division of W. R. Grace & Co., has been completed at a cost of $1,200,000, company officials announced.

At Alliance, Ohio; Perry, Iowa, and Curtis Bay (Baltimore), facilities have been installed for production of a type of granulated fertilizer involving a process characterized by positive heat control and use of ingredients in solution form. These include phosphoric acid and nitrogen or urea solutions, the officials said.

In addition, the process enables production of fertilizers up to the 15-15-15 analysis range.

Safety Factors in Handling Anhydrous Ammonia Pointed Out at Virginia Conference

EDITOR'S NOTE

The author of this article, Herman G. Powers, is production manager, Money Point plant, Smith-Douglass Co., Inc., Norfolk, Va. Mr. Powers presented the paper at the May 25th meeting of the Virginia State Safety Conference, Roanoke, Va.

♥ ♥

Of all the various forms of liquid nitrogen used in the manufacture of fertilizer, anhydrous ammonia possibly demands the most respect from the standpoint of safety in handling it. Use of this material during the past few years has increased tremendously, and most of the industry men who attend safety conferences are acquainted with its use in the manufacture of fertilizer.

But there are also other problems involved. With the farmers using anhydrous ammonia for direct application, many companies are being called upon for advice and instructions in how to handle it safely. Possibly other companies, like my own, have purchased trucks and trailer tanks and in some cases send their own personnel to transport anhydrous ammonia from plant bulk facilities to the fields.

In view of the above points, I feel the proper handling and safety precautions to be taken with this material cannot be over-emphasized nor discussed too frequently with operating personnel. Recently, I have talked with several operators in the plant and I found that several had never been sufficiently educated on the hazards and the aid treatment connected with Anhydrous Ammonia.

First, let us consider handling. Since anhydrous ammonia is an irritating gas, particular care should be exercised in handling it. The work should be done by those who are fully aware of the hazards involved and are properly instructed in the safe technique for handling the product. Most of the common metals are resistant to dry ammonia but moist ammonia will corrode copper, tin, zinc, and many alloys especially those containing copper. Iron and steel are not affected by ammonia. For this reason it is recommended that all equipment for unloading or using ammonia be made of those metals.

Piping should be rigid steel except where short connections are made such as between the tank car and the unloading to the storage tank. In the latter case a wire braid covered 10-ply flexible rubber steam hose fitted with high pressure screw couplings is permissible. Similarly constructed hoses should be used in transporting anhydrous ammonia from tank storage to tank trucks or trailers for field consumption. For utmost safety, valves, fittings, and pipe lines should be of the type especially designed for carrying anhydrous ammonia.

In all new systems or old it is important to test the entire system for leaks periodically before a full charge of ammonia is released into the lines. This can easily be done by filling the lines with compressed air at 100 to 150 psi and then painting each joint with a soap solution. The formation of bubbles will indicate leaks.

The sharp irritating odor of ammonia which can be detected at concentrations far below those that are hazardous to personnel, will serve as a warning that ammonia is escaping from the system. Whenever a leak occurs the personnel attempting to determine its exact location should wear adequate protective clothing, consisting of a rubber suit covering the body from head to toes and a gas mask approved by the bureau of mines. All persons not provided with these safety devices should leave the area as soon as the leak is detected and stay away until the hazard is removed.

When a leak is serious and cannot be stopped in a reasonable length of time, it is advisable to play a hose stream of cold water directly on the leak. The escaping ammonia will be largely absorbed in the water, thereby reducing the hazard of explosion and injury to personnel. As a precaution against explosions it is wise to use only vapor-proof lighting fixtures and spark-proof electrical equipment in ammonia storage areas. In addition, steps should be taken to guard against ammonia gas collecting into pockets under floors and roofs.

As to the inspection and repair of bulk storage tanks within plants the following preparations should be made under competent supervision:

(1) The cleaning crew should be equipped with rubber suits, rescue harness, lifelines and supplied with gas masks.

(2) The tank should be emptied and then freed of ammonia vapors by mechanical ventilation. Vapors should be vented to a safe location.

(3) All lines to the vessel should be disconnected and blanked off.

(4) Manholes and handholes should be opened.

(5) Internal surfaces should be washed down with the hose and steamed, if possible.

(6) Sludge deposits remaining should be removed by the use of suitable non-sparking tools. The washing should then be repeated.

(7) Finally, just before the tank is entered by the inspector or repairman, the atmosphere should be tested by a qualified person for dangerous concentrations of ammonia or an oxygen deficiency. If the former is found, the tank should be re-washed. If a deficiency of oxygen is found or suspected,

(Continued on page 15)

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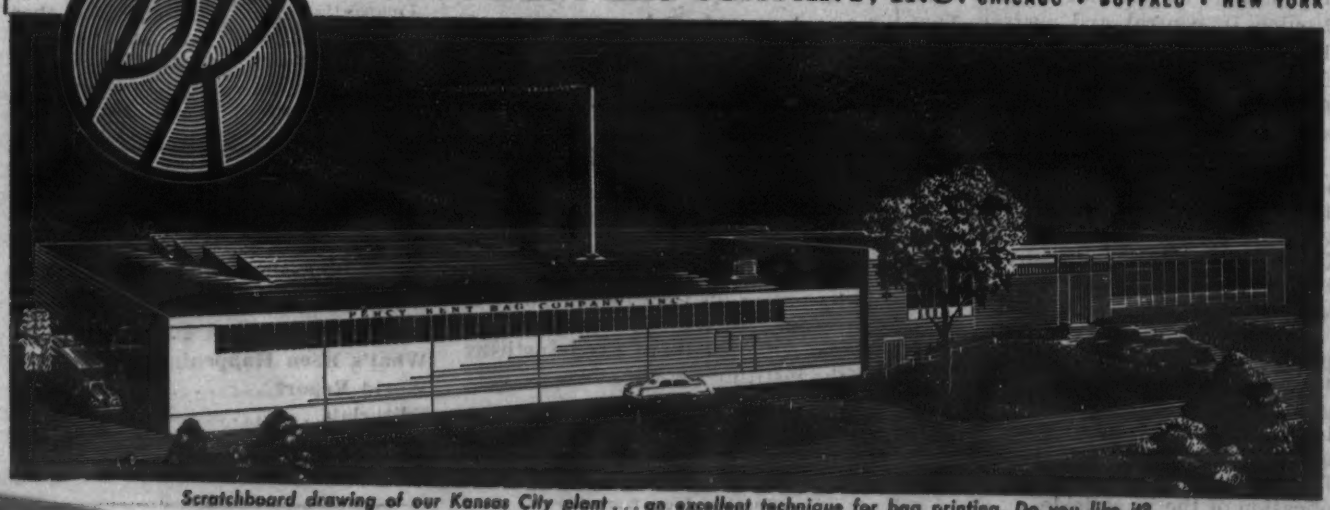

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Robert U. Haslanger

Escambia Elects Robert Haslanger, Dr. N. C. Robertson

NEW YORK—Robert U. Haslanger has been appointed president of Escambia Bay Chemical Corp. He succeeds Kenneth G. Donald who resigned to devote his full time to his duties as vice president and treasurer of National Research Corp.

Dr. N. C. Robertson, director of research, was appointed vice president.

Mr. Haslanger joined Escambia earlier this year as vice president and general manager.

Prior to his joining Escambia, Dr. Robertson headed the petro-chemicals department at National Research Corp.

The following officers were reappointed by the board of directors: D. J. Stark, vice president; J. H. Miracle, vice president; L. V. Tracht, treasurer; E. J. Freiberg, secretary and A. L. McClellan, assistant secretary and assistant treasurer.

At the annual stockholders' meeting held at Dover, Del., the following were elected to the board of directors:

N. C. McGowen, chairman of the board and president, United Gas Corp.; Ed Parkes, executive vice president, United Gas Corp.; George G. Walker, president, Electric Bond & Share Co.; A. A. Talmage, vice president, Electric Bond & Share Co.; R. S. Morse, president, National Research Corp.; K. G. Donald, vice president, National Research Corp.; Mr. Haslanger, and Saunders Gregg, United Gas Corp.

Escambia operates a plant in Pensacola, Fla., where ammonia, nitric acid, ammonium nitrate, and nitrogen fertilizer solutions are produced.

Dr. N. C. Robertson

Texas Ginners' Group Meets at Corpus Christi

CORPUS CHRISTI, TEXAS — The Gulf Coast Ginners Assn. meeting held here attracted cotton ginners from an 18-county area. The meeting was presided over by J. F. Hendricks, president, while the welcome address was given by Jerome Jalufka who is a past president.

One of the speakers, H. S. Cavitt, director of the pink bollworm control program in South Texas and northern Mexico, complimented the group on the cooperation given by ginners.

Mr. Cavitt said the bollworms were showing up heavily in Nueces County, while counties to the west had only very light infestations.

PROGRAM EXPANSION

ROCKY FORD, COL. — Agricultural leaders are studying the expansion of the insect detection program in the Arkansas Valley to include a study of the spotted alfalfa aphid.

George E. Petitt, Vice President Of PCA, Dies at 60

WASHINGTON—George E. Petitt, 60, vice president in charge of sales of the Potash Company of America, and a member of the board of directors of the National Plant Food Institute, died at his home here June 9, following a heart attack. Mr. Petitt had been in ill health for several months, but his condition had apparently improved of late.

A well-known figure throughout the fertilizer industry, Mr. Petitt had spent his entire business life in the trade. In 1917 he joined Virginia-Carolina Chemical Corp. at Alexandria, Va., his birthplace. Later positions included that of superintendent of Armour Fertilizer Works, and a vice presidency of Chilean Nitrate Sales Corp., where he was in charge of sales.

He joined Potash Company of America in 1941, and at the time his death was vice president and a member of the firm's board of rectors.

Mr. Petitt was a veteran of Wo War I, in which he served overse He was a graduate of the Univers of Maryland. Surviving are M Petitt, five daughters, a son and grandchildren. Funeral services w held in Washington and burial at Alexandria, Va.

The board of directors of the N tional Plant Food Institute, dur the Institute's convention at Wh Sulphur Springs, W. Va., passed resolution expressing regret over death.

"Mr. Petitt has served with d tinction as a member of the board directors of the National Plant Fo Institute and has otherwise contr uted generously of his time and t ents in furthering the interests the fertilizer industry," the resoluti said in part.

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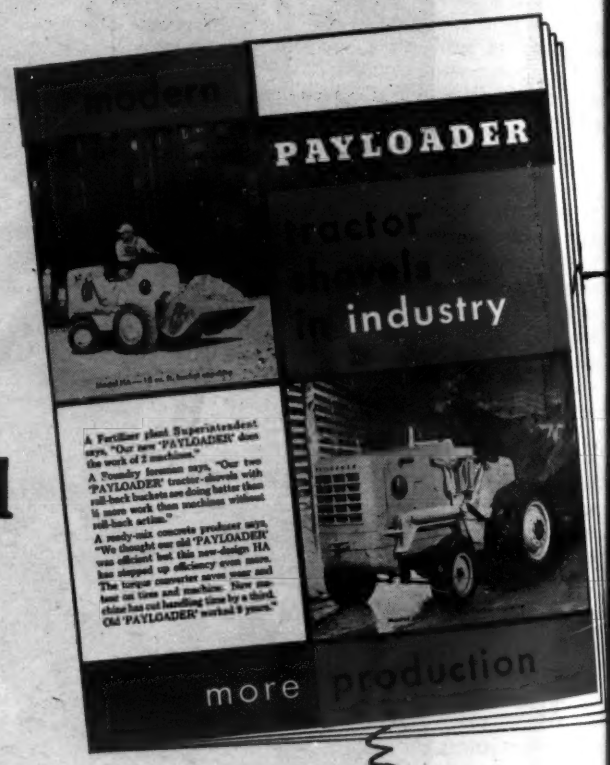

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World Survey of Pest Control Products Published

WASHINGTON—Publication of a survey of the pesticide industry covering the U.S. and 65 foreign countries, the first of its kind in scope and comprehensiveness, was announced by the Chemical and Rubber Division of the Business and Defense Services Administration, U.S. Department of Commerce.

According to the survey, which is contained in a 213-page book titled "World Survey of Pest Control Products," U.S. production of pesticides since the Korean conflict has approximately doubled. This expansion has created a capacity capable of a potential output that domestic requirements cannot absorb.

At the same time the use of pesticides is increasing not only in volume but in variety and application of specialized products for specific controls is becoming more general. To meet the growing demand for specific controls, manufacturers have in the past 10 years expanded the number of compounds available for control of insects, fungi, weeds and the like more than in all previous years of the industry's history.

The survey shows that domestic output of toxic ingredients for pesticides in 1955 at producers' level was estimated at $200 million, with installed capacity twice as great. Total U.S. exports (basic pesticides plus formulated products) attained an all-time high of $79 million in 1955, an increase of $16 million over 1954.

Production of basic pesticides in foreign countries also has been increasing in recent years, particularly in West Germany, France, Belgium and Japan, providing keen competition in world markets.

Included in the survey are data on production, consumption, foreign trade, marketing methods, distribution patterns, advertising media, application equipment and government regulations relating to pesticides. Prospects for increasing U.S. participation in individual foreign markets also are analyzed.

Individual copies of "World Survey of Pest Control Products" may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., or from U.S. Department of Commerce Field Offices. The price is 60¢.

SOIL CENTER PROPOSED

WASHINGTON—A small soil conservation research center at the University of Mississippi is contemplated in the recently House-passed agriculture appropriation bill, according to Rep. Jamie Whitten (D., Miss.). This center, he said, would work in conjunction with a forest research center to provide necessary information for the Yazee and Little Tallahatchee watershed projects in Mississippi.

ICA STUDY

(Continued from page 1)

Korea, accounting for $1 out of every $6 of the Korean aid funds.

Two U.S.-financed fertilizer plants, when completed, will supply two-thirds of Korea's nitrogenous fertilizer needs, and thereby reduce the country's dependence on continuing aid from the U.S. They will save the U.S. over $20 million a year now used now used for fertilizer imports, ICA said.

One plant, now under construction by McGraw-Hydrocarbon Inc. of New York under an ICA-financed contract, will cost about $21 million. It is scheduled for completion in about two years. The second plant which is planned is expected to require about $19 million in ICA financing.

Before Korea was divided by the Communists, nitrogenous fertilizer production from plants in North Korea was sufficient to meet the country's needs. The loss of these plants behind the Iron Curtain, coupled with the influx of 4 to 5 million refugees from the north raising South Korea's population to over 22 million, greatly increased the food production requirements of South Korea and made the fertilizer problem one of the most critical facing the new Republic.

South Korea has about 5,000,000 arable acres, which means that about four people must be fed from each acre. This land has been farmed for several thousand years, and requires heavy use of fertilizer to maintain its output. The Koreans have used commercial fertilizer for many years and with it have kept food production in line with rapidly increasing population.

The imports of fertilizer financed by ICA are sold to Korean farmers through the ROK government for Korean currency which is then used to help meet local currency costs of the military and non-military aid programs.

The fertilizer consultant team will review and analyze Korea's use of fertilizer and lime in recent years and recommend quantities of nitrogen, phosphates, potash and lime that may be needed. They will make suggestions for programs to bring knowledge of more effective uses of fertilizer to Korean farmers.

Their study will consider the type and quantity of fertilizer materials that may be needed from the second factory, and supplementary phosphate and lime manufacturing mixing plants which may be required.

They will review the fertilizer distribution and financing facilities, and recommend how they can be improved to provide fertilizer of the types needed at the time required and at the lowest cost to the farmers.

Fertilizer procurement and import plans and procedures will be reviewed, including the receiving of fertilizer at ports, and recommendations made for improvement of the system.

MCA Committee Chairmen Elected

WASHINGTON—P. W. Tucker, Phillips Petroleum Co., Bartlesville, Okla., and J. O. Browning, Merck & Co., Inc., Rahway, N.J., have been elected co-chairmen of the chemical packaging committee of the Manufacturing Chemists' Assn. C. E. Pruett, the Du Pont Co., Wilmington, was elected vice chairman.

J. E. Weaver, Columbia-Southern Chemical Corp., Pittsburgh, has been elected chairman of the tank car committee of the association. D. M. Long, Pennsylvania Salt Manufacturing Company, Philadelphia, was elected vice chairman of the committee.

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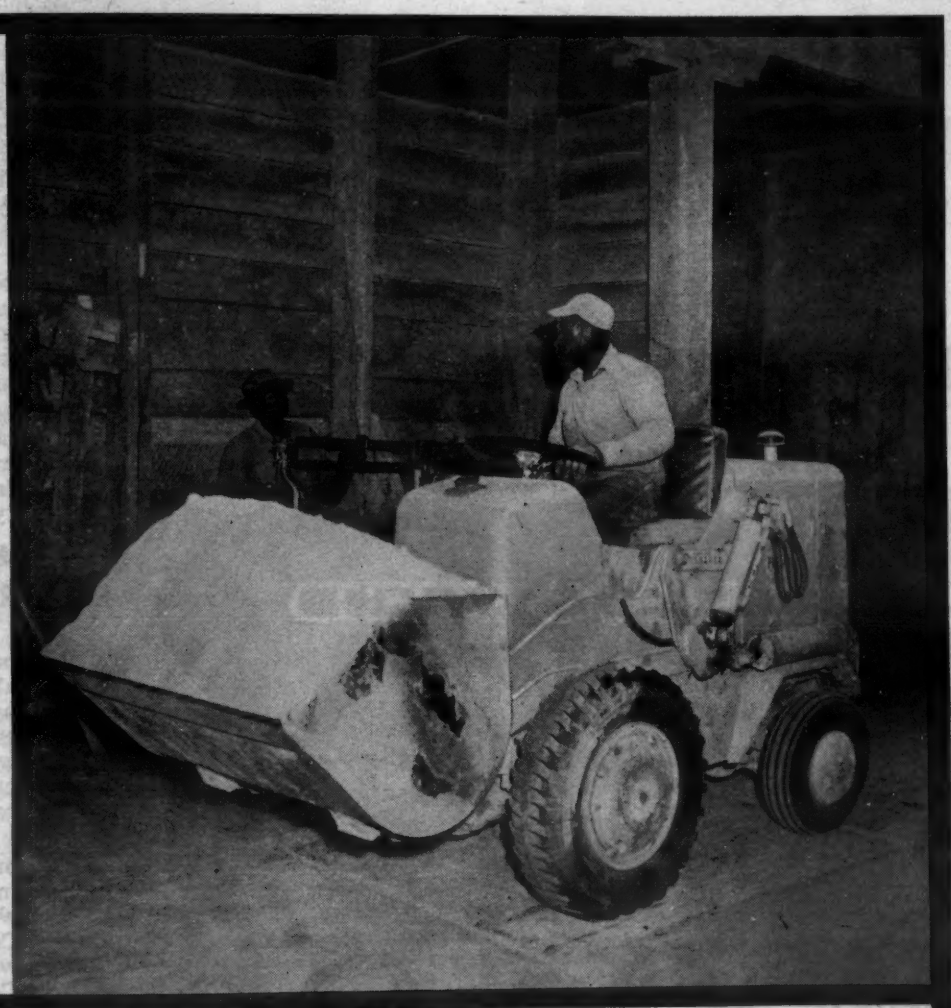

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INSECT AND PLANT DISEASE NOTES

Missouri Corn Fields Attacked by Cutworms

COLUMBIA, MO.—Cutworm damage to corn has become common over most of the northern half of Missouri. Light damage can be found in many fields although heavy damage seems to be confined to only a few.

The worms doing the damage are primarily black cutworms, although a few clay-backed cutworms are also present. Although some of the worms are nearing pupation, there are a good many which appear to have another two weeks of feeding ahead of them.

Blister beetles are beginning to show up in large numbers in alfalfa and some other crops.

Webworms are causing some trouble in corn fields, especially those that have gotton fairly weedy. Grasshopper damage is beginning to show around the margins of some fields. Damage is particularly noticeable in northern Missouri.—Sterling Kyd and George W. Thomas.

Thrip Losses Suffered In Arizona Fields

PHOENIX, ARIZ.—Thrips have been found causing serious injury to cotton near grain fields in areas of Arizona. In Pinal County, thrips in some instances were knocking off 8-10 squares per plant in fields where cotton was 12-18 in. high.

Spider mites were also showing up in a few fields. The cotton leaf perforator is showing up both in planted and stub cotton and some control measures are being practiced. In stub cotton in the Litchfield Park area, Lygus are causing enough damage to warrant control measures.—J. N. Roney.

Grasshopper Hatching Rapidly in Iowa

AMES, IOWA—The hatch of differential grasshoppers is proceeding rapidly in south central and southwest Iowa. In eastern Iowa, vegetation is heavy, keeping the ground cool. Populations now range from 1-5 per square yard. The big hatch is expected 7-10 days after hay is cut. At Ankeny there are 100 to 300 young hoppers per square yard in fencerows, roadsides and ditch banks. They have already destroyed enough vegetation so they are moving into crops.

Soil insects continue to cause damage. Seed corn maggots, snout beetles, ants, cutworms and wireworms have destroyed thousands of acres of corn and soybeans. Reports indicate t some of the destroyed fields w treated with low dosages of soil secticides (½ pound per acre bro cast).

Ants and corn root aphids are sh ing up in local areas. Wireworms other soil insects may complicate picture.

Wireworms in corn are still do damage, especially in northern co ties.

Armyworms and wheat-head ar worms are in heavy oats and bro in central Iowa. The corn borer spreading and development mo along rapidly last week. Here results of stalk examinations: Wa lo County 8% larvae, 92% pupat 10% emerged; Ankeny 2% larv 98% pupation, 66% emerged, 6 masses per 100 plants (24-in. co North Iowa: 10% larvae, 90% pated, 20% emerged (10-16-in. co —Harold Gunderson.

Medfly Seen in 14th Florida County

GAINESVILLE, FLA.—The lat report of the trapping of an ad Mediterranean fly in Melbourne, B vard County, Florida, June 7, pus the total number of counties infes to 14. The infested counties are: Da Broward, Palm Beach, Hendry, C lier, Charlotte, Highlands, DeSo Manatee, Hardee, Lee, Sarasota, P and Brevard.

The 12 hosts that larvae have be reported from are: Calamondin, su nam cherry, orange (sweet and sou grapefruit, guava, tangelo, jamb kumquat, mango, rose apple, pea and sapodilla.

Almost all infestations that ha been found outside of Dade Cou are on or near a highway leadi from the infested area in Dade Cou ty.—H. A. Denmark.

Alfalfa Field Damage Reported in Maryland

COLLEGE PARK, MD.—There h been some damage to second cutti alfalfa in Talbot County, Maryla by the alfalfa weevil. In general, ho ever, the second growth is free fr weevil, especially where a spray w put on immediately after the hay w removed.

Pea aphids averaged 35 per swe on second growth alfalfa in Was ington County. Variegated cutwor were found in alfalfa in Dorches County. Potato leafhopper adul were found on alfalfa in Frederi County. Leafhoppers are causing y lowing of the later cuttings of alfal

A survey of wheat fields in Was ington County showed Hessian populations to be very low. L spring there was a heavy infestati in wheat in this county. Armywor are present in some small grain fie in Dorchester and Caroline Counti

Cutworms are doing some dama to corn in Montgomery County. Wi worms have done light to moder damage to field corn in Wicom County.

Snap beans and soy beans in Salisbury area have been damag by the bean leaf beetle. Colorado p tato beetles are abundant on untre ed potatoes and tomatoes on the lo er Shore, and are showing up Prince Georges County. Striped cumber beetles are abundant on c taloupes, squash and cucumbers in Salisbury area and are troublesom on cucumbers grown for pickles Calvert County.—Theo. L. Bissell a Wallace C. Harding, Jr.

Varied Pests Watched In Indiana Orchards

VINCENNES, IND.—First bro plum curculio activity is past in co mercial Indiana orchards. Stink-b activity is light and Oriental fr moth activity is between the first a second brood and first brood activ was extremely light.

Weather conditions were not v favorable for codling moth activ

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during the past week; however, 11 entries per tree were found in the tops of trees in one orchard where protection had been weak and a heavy population of codling moth larvae was carried over from 1955.

European red mite populations in the Vincennes area are generally relatively light at this time. Counts made June 5 on 100 leaves from plots where no miticide has been applied this season averaged 0.7 mobile form and five eggs per leaf.

Various sized armyworm larvae up to three-fourths grown have been causing moderate to severe injury in Fritchton, Palmyra and Vincennes townships of Knox County. Weather conditions have been favorable for this pest. About 2,000 acres had been sprayed for armyworm control in Gibson County prior to June 1.—D. W. Hamilton.

South Carolina Fights Boll Weevils, Thrips

CLEMSON, S.C.—Boll weevils and thrips are causing damage and stemphyllium leaf spot is seriously defoliating alfalfa in some areas of South Carolina.

Sugarcane beetle damage has been noted in Newberry County. Among the problems of ornamentals are: Oak leaf blister, scald of camellia (caused by too severe pruning of roots in transplanting), scald of boxwood, thrips and beetle damage to rose blooms.

Thread blight of pecan is reported in the coastal area. Among the forest tree insects and diseases are: Twig pruner, lice, leaf miner and leaf blister of oak.

Fire blight of apple is widespread and bacterial spot of peach has been noted.

The squash bug is unusually numerous on watermelon in Barnwell and Chesterfield. Blister beetles are unusually numerous on tomatoes in the coastal area.

Cabbage looper moths are unusually abundant. The lesser cornstalk borer is reported damaging corn and beans at Spartanburg. Southern potato wireworms are unusually numerous at Charleston. Flight of corn earworm moths increased at Florence. Cutworms are still numerous at Clemson, Florence and Charleston.—J. H. Cochran.

Mexican Bean Beetle Spotted in Georgia

ATHENS, GA.—The Mexican bean beetle is infesting 70 acres of lima beans in Harris County, Georgia.

Heavy infestations of the squash bug on cantaloupes and squash in Madison County have been noted.

The corn earworm has infested 15 to 25% of the ears in sweet corn in Tattnall County; 90% in nearby field corn.

The budworm is moderate to heavy in Tattnall, Candler, and Emanuel county tobacco fields.

Moderate to heavy infestations of aphids on tobacco in Tattnall and Candler counties are noted.—C. R. Jordan.

Chloropicrin Added to Dow Fumigant Line

MIDLAND, MICH. — Chloropicrin has been added to the expanding group of fumigants produced by the Dow Chemical Co. It will carry the trademark name Picfume.

The fumigant is effective for control of a wide range of organisms, including such soil pests as nematodes, insects, bacteria, fungi and weed seeds, and it is used also for control of rodents and many pests of stored grain and other commodities, Dow said.

Chloropicrin was one of the first materials to achieve widespread use as a soil fumigant. Its earliest general field use was in pineapple fields in Hawaii under the pioneering efforts of Maxwell Johnson during the early 1930's.

California Lists Its Ten Most Injurious Insect Pests on Basis of Crops Damaged

SACRAMENTO — California's 10 most injurious insects have been listed by the Bureau of Entomology, State Department of Agriculture. These insect public enemies have been rated on the basis of crop damage compiled by County Agricultural Commissioners and from surveys and operations of the department.

The list includes two general groups of insects; spider mites and grasshoppers, in addition to the top 10 most damaging pests. The results were announced by Stewart Lockwood, assistant chief of the bureau.

The number one spot on the list is held by the corn earworm, otherwise known as the cotton bollworm and tomato fruitworm. It attacks crops which last year were valued at $423,193,000. This figure represents the potential damage if the crops attacked had been totally destroyed.

Two lygus bugs, almost identical, were accorded second place in the compilation of the potential damage which they could do if not controlled.

The others were rated in this order: California red scale, black scale, beet leafhopper, spotted alfalfa aphid, San Jose scale, olive parlatoria scale, peach twig borer and codling moth.

An estimate of the place which the khapra beetle, a major pest of stored grain, would occupy in the agricultural economy of California, if uncontrolled, was not attempted. However, during the 1955-56 fiscal year, California budgeted $438,000 and the federal government $242,000 in the campaign of eradicating the pest from infested premises. In 1955, a total of 101 properties, with a total of 37,670,000 cu. ft., were treated and released from quarantine.

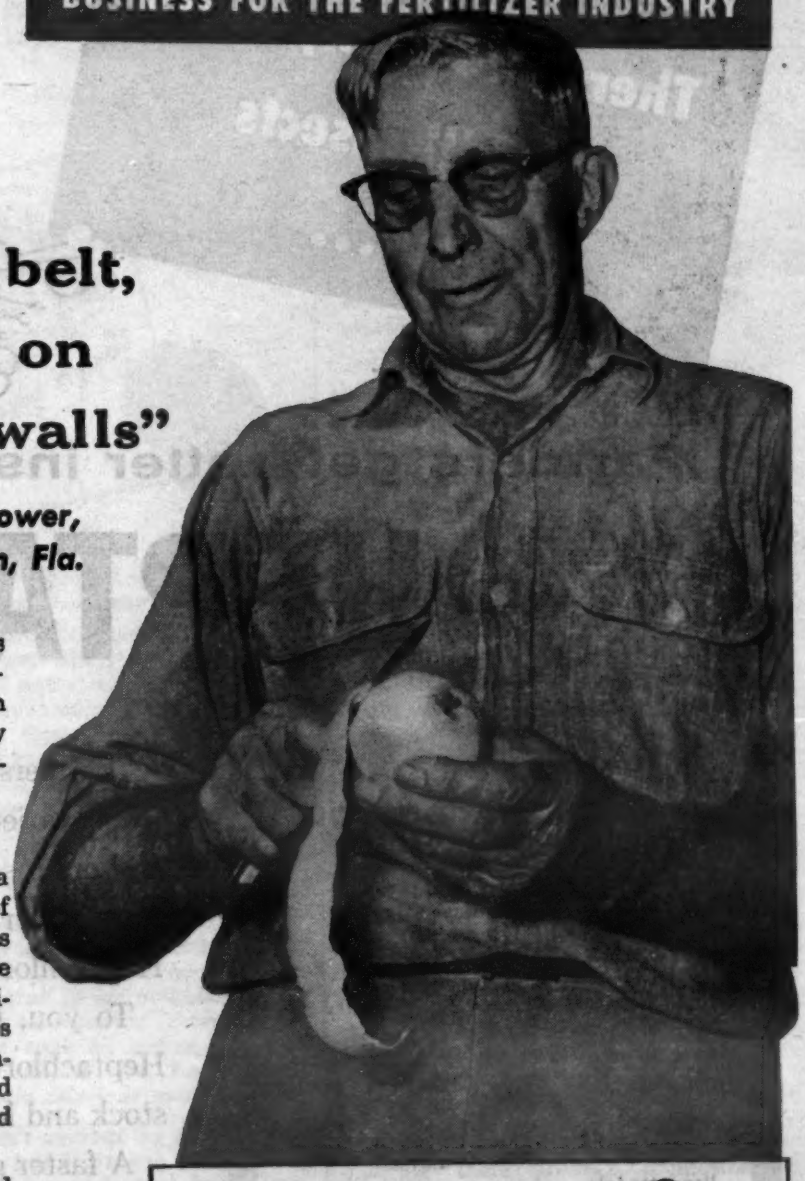
Prentiss Appointment

NEW YORK—W. J. Fowler of the Whitaker Oil Co. has been named sales representative for Prentox household and industrial insecticide concentrates in the tri-state area of Georgia, Alabama and Florida, it has been announced by Prentiss Drug & Chemical Co., Inc., New York. Mr. Fowler, who has been associated with the insecticide business for many years, will make his headquarters at 1561 Marietta Road N.W., Atlanta, where warehouse stocks of Prentox products will be maintained.

KENNETH A. SPENCER HONORED

KANSAS CITY—Kenneth A. Spencer, president of the Spencer Chemical Co., received the Sam Casey award for 1955-56 from the Society for the Advancement of Management here June 6. The award is given each year to the person who does the most good for management in the greater Kansas City area.

HOW UNION BAG BUILDS MORE BUSINESS FOR THE FERTILIZER INDUSTRY



"In the citrus belt, we're sold on fertilizer in Multiwalls"

F. M. Hahs, citrus grower, Land O'Lakes region, Fla.

"When you open up an orange like this one," says Mr. Hahs, "you see—and taste—what good fertilizer can do. I've been sold on fertilizer for 33 years, but it's never been as easy to handle as it is now that it comes in Multiwall bags."

Welcomes fertilizer tips from Union Bag

This veteran citrus grower, who recently won a $500 award as the "longest steady customer" of the Gulf Fertilizer Company of Tampa, operates his 29-acre citrus farm along scientific lines. He is an interested reader of tips on fertilizer application that come to him through Union Bag's countrywide information program. Union-sponsored features on fertilizer use are seen or heard in newspapers and magazines, and on radio and television stations.

Most growers and farmers, like Mr. Hahs, find Multiwall paper bags, as made by Union Bag, the most efficient containers for fertilizer. Tight and clean, Union Multiwalls are easy to handle, stock and store; do a real job of selling your brand name. They spell satisfied farm customers for fertilizer manufacturers and dealers, contribute handsomely to a steadily increasing volume of fertilizer sales.

It's good business to use Union Multiwalls, made by a company that works actively to create good business for you.

"Union Bag's Information program helps sell more fertilizer because it shows farmers how to use fertilizer more efficiently."

Mr. R. R. Reed, Sales Manager, Gulf Fertilizer Company, Tampa, Florida.

The Gulf Fertilizer Company, which has served Florida for 54 years, packages many fertilizers in Union Multiwalls.

UNION Multiwall Bags

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Aphid Parasites Released in Missouri

COLUMBIA, MO. — Entomologists at the University of Missouri have announced they are turning loose thousands of tiny parasitic wasps to feed upon the spotted alfalfa aphid—a new enemy of Missouri alfalfa fields.

Harry E. Brown, university entomologist, said the parasites use the aphid as a natural host and soon destroy the alfalfa pest. Although the parasites should not be expected to completely wipe out the spotted aphid, Mr. Brown said, they will help control the crop pest.

Mr. Brown said if the parasites prove effective against the spotted aphid, they will spread naturally over the entire area of infestation.

The parasites were first imported from France and Israel by the U.S. Department of Agriculture. The USDA now is growing them in New Jersey and sending three shipments a week, from 3,000 to 15,000 of the parasites, to the University of Missouri Agriculture Experiment Station.

They are being released in Southwest Missouri, where the alfalfa disease first became a problem last September.

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ORCHARD GRASS SEED

BLACKSBURG, VA.—Virginia now produces about 40% of the orchard grass seed grown in the U.S., reports W. W. Lewis, agronomist at Virginia Polytechnic Institute.

Entomologist Predicts Grasshopper Infestation

LUBBOCK, TEXAS — One of the worst grasshopper infestations in 20 years has been predicted by Dr. Donald Ashdown of the Texas Technological College Horticulture Department.

This prediction is based on several conditions. He said several million acres north of Lubbock had been surveyed and an unusually high number of "egg pots" had been found. They have been preserved by the long drouth, and may hatch out this year into heavy infestations.

He recommends that farmers and ranchers in the area be on the alert. There will be no funds for this eradication in Texas, according to state Agriculture Commissioner John White, so landowners must take the initiative in controlling the hoppers.

There are many ways to kill insects but...

Farmers get better insect control with HEPTACHLOR

HEPTACHLOR CONTROLS:

Forage insects	Soil insects
Alfalfa Weevil	Corn Rootworms
Alfalfa Snout Beetle	White Grubs
Spittlebug	Cutworms
Grasshoppers	Wireworms
Sweet Clover Weevil	Seed Corn Maggot
Cutworms	White Fringed Beetles (Larvae)
Armyworms	Japanese Beetle (Larvae)
Lygus Bugs	Flea Beetles (Larvae)
Harvester Ants	False Wireworms
Egyptian Alfalfa Weevil	Root Weevil
Black Vine Weevil	European Chafer
Plant Bugs	Ants
Leafhoppers	Asiatic Garden Beetle (Larvae)
Clover Root Borer	Root Maggots
Cotton Insects	Onion Maggot
Cotton Boll Weevil	Strawberry Root Weevils
Cotton Fleahopper	Strawberry Root Worms
Cotton Thrips	Sugar Beet Root Maggot
Rapid Plant Bugs	Western Harvester Ant
Tarnished Plant Bugs	Eye Gnats
Armyworms	
Cutworms	
Garden Webworms	

...and many others

● Farmers prefer Heptachlor because it controls a wider variety of insects—soil insects, forage insects, cotton insects, and many others. They prefer Heptachlor because it's safe...a residue tolerance for Heptachlor has been established on many crops.

To you, this wide range use and acceptance of Heptachlor formulations means faster turnover of stock and less money in inventories.

A faster growing demand for Heptachlor insecticides is also being built by advertising in your agricultural markets.

Heptachlor is available in many convenient forms and concentrations—wettable powders, emulsifiable concentrates, and granules. For complete information on Heptachlor, and recommendations for its use write to:

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Missouri Plant Nutrition Group Elects J. H. Gillie

COLUMBIA, MO.—New program to help get information to farmers and fertilizer dealers were agreed upon in a meeting held June 5-6 at Columbia, Mo. The meeting was of the Missouri Soil Fertility and Plant Nutrition Council, an organization which includes farmers, dealers and fertilizer industry people interested in Missouri soil fertility.

New officers elected for the coming year are: J. H. Gillie, Phillips Petroleum Co., Kansas City, president; R. C. Graham, Virginia-Carolina Chemical Co., Caruthersville, Mo., vice president; B. B. Mainord, Farm Bureau Service Co., New Florence, Mo., secretary-treasurer. New board members are Austin Mount, Davison Chemical Co., Joplin, Mo.; Dick Balzer, Spencer Chemical Co., Kansas City, and Tate Sweeny, Darling Fertilizer Co., Marshall, Mo.

Plans were made to buy metal signs to identify many of the Missouri fertilizer test plots of the extension service.

Plans were also made to arrange for fertilizer dealer tours late this summer in conjunction with the extension service. Action was also taken to send out quarterly news releases to all members of the organization and others interested in soil fertility concerning the latest agronomic and soil information.

Membership requirements and the date for paying dues were also changed to strengthen participation in the council's membership.

In addition to field tours at Sanborn Field and South Farms, Dr. W. A. Albrecht, Dr. George Smith and John Faloon of the University of Missouri soils department spoke at the sessions.

$3,000,000 Israel Farm Chemical Plant Opens

HAIFA, ISRAEL — A $3,000,000 chemical plant, established in Israel with American and European capital, know-how and equipment, began operations last month.

The plant produces chlorine, caustic soda and a number of related chemicals essential to industry and agriculture, for both domestic and export requirements. It was established by Electrochemical Industries (Frutarom), Ltd., which is affiliated with Palestine Frutarom, Ltd., Haifa, manufacturer of essences, essential oils and aromatic chemicals for the past 23 years. The plant is on a 75 acre site near Haifa.

Nearly half of the $3,000,000 investment came from a group of American businessmen who, in 1953, formed the American Electrochemical Industries, Inc., Cleveland, for the purpose of investing in the Israel venture.

The company also produces a number of insecticides and fungicides, including benzene hexachloride, lindane and copper oxychloride, fungicide used for the treatment of vines, citrus trees, olive and other trees.

The company's formulation plant, which is equipped with the modern installations for milling, crushing and mixing, will also manufacture various products in the form of dusts, wettable powders and emulsions.

Duster Killed

JOINER, ARK.—Roy Johnson, 38-year-old aviator of Minneapolis, was killed May 16 when his crop-dusting plane crashed in a vetch field after striking a garage near the heart of this town of 600. Mr. Johnson, a former flying instructor, was employed by the Mid-Continent Aerial Sprayers and Dusters, Inc., of Hayti, Mo. He had been dusting small grain in this area since May 12, and was returning from spraying about six miles northwest of here.

Special Retail Section

Better Selling

Richer Fields for Dealers

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

ON CAMERA—A Bradley County, Ark. farm family is shown above ready for a television performance on a program sponsored by Planters Fertilizer & Soybean Co. of Pine Bluff, Ark. From left to right are Johnnie Holmes, farm reporter for Station KATV, Mrs. Howard Thomason, Mr. Thomason, Faye Thomason and Ray Hunter, Bradley County agent.

Weekly TV Program Promotes Sales for Arkansas Company

By AL. P. NELSON
Croplife Special Writer

A weekly television program with many varied educational and merchandising features is used annually January through April by the Planters Fertilizer & Soybean Co., Pine Bluff, Ark., makers of Razorback fertilizers.

The company, which is a four way partnership of George, James, William and Louis Dunklin, brothers, began making fertilizer in 1948 and added a soybean plant in 1950. The firm also operates a large cotton gin. The principal crops in this area are cotton, rice and soybeans, and the Planters firm is disseminating all the information it can to farmers about fertilizing and raising these crops.

The television program is a daily feature, five days a week, with a veteran farm reporter, Johnny Holmes, KATV, Pine Bluff, conducting it. The Planters Fertilizer & Soybean Co. sponsors the program on Thursday at 12:45 p.m. It is a half hour program, with 15 minutes usually devoted to a guest speaker.

To realize the importance of this program we need to know a little more about Johnny Holmes and how thoroughly he covers the farm situation in this area of Arkansas.

Johnny was raised on a Rio Grande Valley cotton and livestock farm. He has a bachelor of science degree in agricultural education from Texas A. & M. College and has 10 years of experience on radio and television. He assisted with two Texas farm and home programs from Texas A. & M. College for two years, served as farm editor in Cedar Rapids, Iowa for two years and was farm service director for KLRA in Little Rock, Ark., for three and one half years.

Johnny not only travels through the rural areas of the state a great deal, but he makes hundreds of interviews with farmers, tapes many of them, and then uses them on his television programs.

When he broadcasts the Planters Fertilizer & Soybean Co. programs on Thursdays he often plays a tape recording which consists of interviews with farmers on their experiences with fertilizers.

In addition, Johnny accumulates many soil conservation and fertilizer facts of his own, and uses these on his program. His program is built around two ideas. One is supplying current timely information on a regular basis such as weather, news and markets. The second idea is to include features and reports on farm and home activities from the actual business of farming and home making to all other aspects of rural life.

He travels about 85,000 miles in his car annually visiting farmers and produces about 400 rural slanted television programs a year, with about 1,000 guests. He uses about 5 miles of film which he takes himself on rural scenes, and about 1,200 still pictures and slides relating to fertilization and other farm topics.

This television program costs the Planters Fertilizer & Soybean Co. about $75 per program. The firm spends about $1,000 a year on the program, and this is the second year it has run the program, according to George Dunklin.

The Planters firm helps Mr. Holmes to get fertilizer company representatives, county agents and others to appear on the weekly programs. These men are given fifteen minutes to talk about some phase of the fertilizer problem, or one related to it.

These talks are very well received, judging from the letters which Planters and the television station receive. Each guest talks for 15 minutes, as a rule, and the rest of the program pertaining to markets, news, etc. occupies another 15 minutes, including commercials.

When the speakers are lined up in advance, Planters Fertilizer and Soybean Co. has special cards printed which announce the talk. Then these cards are mailed to 500 or more farmers in the area.

For instance, during the 1956 winter and spring season, cards were sent out to farmers advertising the fact that "A. B. Beasley, agronomist, Spencer Chemical Co. was scheduled to give a talk March 8 on 'Fertilizing Corn'." Another card said that Leo

(Continued on page 14)

SHOP TALK

OVER THE COUNTER

FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

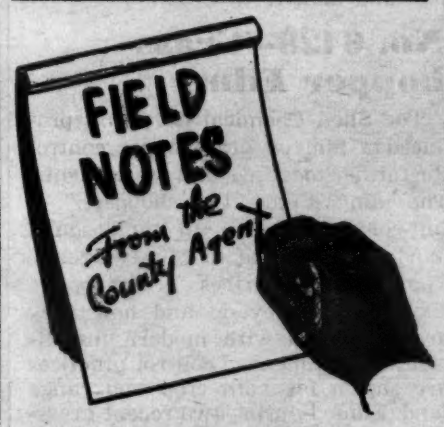
Why is it that farmers often wait too long to start their insect control program? Despite the effectiveness of insecticides in keeping down insect damage, millions of dollars annually are lost to cotton pests.

County Agent James Taylor of Howard County, Texas, thinks he has part of the answer.

"Farmers depend too much upon county agents and entomologists," he says. "Most of us are busy with the insect control program from June to September. Yet we can't get around to enough farms. With some 800 farms in this county, I can't possibly inspect every cotton field in time to save it from the bugs and worms.

"If farmers would attend the insect meetings and field days, study the insect guide and try to learn the various insects, they could often stop an infestation before it starts.

"Instead they sometimes wait until a county agent can get out to check the cotton patch. He may be three or four days getting to it because of previous commitments, and by that time the insects have made enough headway to cost the owner several bales of cotton."



By RAYMOND ROSSON
County Agent, Washington County, Tenn.

His neighbors tacked a "C.B." onto his name, but Old Joe wasn't cocky over it, no, not at all. With humility he went about doing good. He liked the better things of life, and the pretty things. He lived at the edge of town, just where the country begins. He owned only a few acres of land and they were larger than most acres; they were deeper just like his thinking.

C. B. stands for Community Builder, and Joe was just that. He worked for a better school and a better church in his neighborhood. Naturally his business in town was good. He took an active part in all civic affairs. He knew well what public relations meant.

Joe wasn't average by a long shot. He didn't know French or physics, neither did he grade high in biology or geology. He did know people however and we suspect that the C.B. after his name meant more to him and more to others than any other degree that could have been conferred on him.

Her neighbors placed a "G.N." after Dot's name. She was not one of those "Gimme Gals." She never traveled far and wide. Her calls were made without calling cards. Instead she used flowers; home baked rolls; a cherry pie; some grape juice and to a newcomer it was a dressed hen; to a shut-in, a good book. She would see that some older person got to church on Sunday. She was Santa Claus to many little tots.

G.N. stands for Good Neighbor, and Dot was made happy when they added it after her name.

The world needs good neighbors and community builders. How many CB's and GN's do we have in our civic clubs and community organizations?

Newsletter Helpful

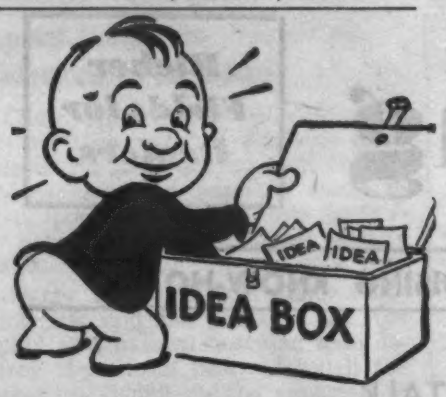
Among the firms which use a newsletter to educate and keep in contact with customers is HoMar Agricultural Chemicals, Manhattan, Kansas.

Designed to assist farmers in telling them how to help control weeds, insects, grasshoppers, brush, and termites, the newsletter has an accepted place in the company's product promotion plans. While the newsletter does not make any prominent appeal in behalf of the company's products, it does emphasize the value of farm chemicals in the various control programs. Control recommendations are included in detail.

More and more firms are supplementing their product promotions with newsletters which have the appeal of arriving at the farmer's mailbox when a particular weed or insect is causing the most destruction. That is when farmers are most receptive to a solution. The appeal of timeliness not only helps sell farm chemicals; it hits the farmer when he is most concerned about possibly losing a sizable part of his crop to weeds or insects.

Profitable 600 Sq. Ft.

Although only 600 sq. ft. (20 by 30 ft.), the retail store of J. J. Moreau & Son, Inc., Manchester, N.H., makes strategic use of its fertilizer, seed and related departments. The store's location next to a U.S. post office sub-station helps attract traffic. Among its sales accomplishments for one year are: 250,000 lb. of fertilizer; 21,000 lb. of lawn seed; 30,000 seed packets; 400 parakeets; 90 canaries; and sizable quantities of feeds, remedies and pet supplies.



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6425—Aphid Control Booklet

An 18-page booklet prepared by the agricultural chemicals division, American Cyanamid Co., is entitled, "Control the Spotted Alfalfa Aphid With Malathion." The booklet considers the seriousness of the pest, history and spread of the aphid, damage to alfalfa, how to identify it, host plants, controls, advantages of malathion, how to use the product and points to remember in a control program. Advantages claimed for malathion are: Effective control in all areas, safety in handling, may be used next to barns and livestock, suitable for treatment for alfalfa to be fed to cattle, effective for mites, weevil larvae, leafhoppers and other alfalfa pests and availability in spray and dust formulations. The booklet is available without charge. Check No. 6425 on the coupon and mail it to Croplife.

No. 6426—Liquid Mixed Fertilizer

The Midstate Machinery Co. has prepared a brochure entitled, "Everything You Need to Manufacture and Sell Liquid Mixed-Fertilizer." Three separate liquid mixed-fertilizer plants have been designed by the company, according to the brochure. Each one can be assembled and erected locally or can be purchased with erection completed. Capacities range from 10-30 tons per hour. All plants incorporate the scale system, and ingredients are weighed as they are added during the manufacturing process. Described in the brochure are the company's facilities for providing equipment, training, chemical formulas, cost data, sources of supply and merchandising aids. To secure the brochure check No. 6426 on the coupon and mail it to Croplife.

No. 6428—Grasshopper Film

The Shell Chemical Corp. has produced a film on grasshopper control for farmer meetings and other events. The film, "Exit Grasshoppers," a full-color, 10 min., 16 mm. sound movie, is available to county agents. The movie describes grasshoppers, the damage they do and how they are controlled with modern insecticides. Recommended control practices are shown for both crop and range land. Filmed during two recent grasshopper wars, the film tells how aldrin, Shell insecticide, has been used to treat infestations. It shows a U.S. Department of Agriculture cooperative control project over millions of acres, and a University of Wisconsin aldrin spray demonstration in severely infested crops. Check No. 6428 on the coupon, clip and mail it to secure more complete details about securing the film.

No. 6429—Formulation Pad

A sample formulation pad for use in fertilizer mixing is being distributed free by the Nitrogen Division of Allied Chemical & Dye Corp. Mixing companies can use the sample as a suggested design in making up their own formulation pads, company officials state. The pad contains 90 identical forms which mixers can use in recording ingredients used in any given mixture. Inside covers of the pad carry three sets of tables: (1) Detailed analyses of nitrogen solutions; (2) the number of pounds of each solution that must be used to add specified units of nitrogen; (3) the equivalent acidity or basicity of all commonly used nitrogen carriers. A copy of the formulation pad may be obtained free by checking No. 6429 on the coupon and mailing it to Croplife.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6419—Applicator

Details of a universal hitch applicator are available from the Pollard Manufacturing Co. Company officials state that the hitch permits rear mounting the mixed liquid fertilizer applicator to all tractors, regardless of model or age. Six-row and 8-row models are available. Boom height is adjustable. Secure more complete details by checking No. 6419 on the coupon and mailing it to Croplife.

No. 6416—Soil Moisture

A slide film with an accompanying 25-min. recorded commentary on how soil moisture measurement works and the benefits it can provide has been prepared by the Rayturn Corp. The film deals with soil moisture-plant growth relationships and with the control of irrigation through soil moisture measurement. The slide film is available at no charge for individual meetings and at cost for permanent use. Check No. 6416 on the coupon and mail it to secure more complete details.

No. 6421—Speedometer

Details of a farm speedometer used to coordinate over-the-ground speed of farm equipment with the flow of anhydrous ammonia are available from the manufacturer, the instrument division of Stewart-Warner Corp. The company states that the unit, installed either on a tractor or rig, registers the actual speed and total distance traveled regardless of varying tire sizes, gear ratios, slippage, etc. The speedometer registers speeds up to 10 miles per hour and comes in a complete kit. To secure more details check No. 6421 on the coupon and drop it in the mail.

No. 5448—Side Seam For Bags

A new overstitched side seam for burlap bags, which is said to eliminate raveling of loose weft yarns on the cut edges of the burlap, has been introduced by the Bemis Bro. Bag Co. The seam is called the "Edge-Lock." Loose weft yarns coming loose and mingling with the product packed has long been a problem with burlap bag users, and has become increasingly so with the growing trend toward automatic feeders, automatic seed planters and other mechanized farm operations, according to company officials. Reports indicate that the seam completely eliminates the loose weft yarn problem, they state. Secure more complete details by checking No. 5448 on the coupon and mailing it.

No. 6420—Potash Booklet

A new booklet, entitled, "Potash in Agriculture," has been prepared by the American Potash Institute, Inc. Single copies are available without charge but quantity shipments necessitate a charge for the actual cost of printing, according to institute officials. Sections are devoted to background information about potash, its use in plant nutrition, potash in soils, diagnosing needs, potash fertilizer materials, application, crop response and history of the product. A number of pictures and diagrams are part of the 34-page booklet. Check No. 6420 on the coupon, clip and mail it to secure the booklet.

No. 6418—Sprayer

New literature has been prepared by the Spra-White Chemical Co. on its sprayer line, called by the trade name, Spray-Master SM-3KW. Company spokesmen state that the sprayer provides ample pressure and capacity to handle the spraying of trees, orchards, vineyards, parks, nurseries, roadsides, heavy brush, etc., and can be used with fungicides, insecticides, herbicides and other liquids. The unit consists of a piston-type pump which delivers 12 gal. per minute at 400 lb. pressure, it is claimed. Other characteristics: The unit has a single-cylinder 4-cycle air-cooled 3.6 h.p. engine; pressure controller, it is portable, has mist-to-stream adjustment and a pressure variation from 30 to 800 lb. per square inch. Secure additional information and literature by checking No. 6418 on the coupon and mailing it to Croplife.

No. 6423—Applicator Kit

New literature has been prepared by the Krause Corp. on its tractor-mounted applicator for liquid fertilizer. The applicator, which comes in kit form, permits the "farmer-owner to top dress or side dress with liquid nitrogen or other solutions at the exact time and rate he desires," according to company officials. The literature states that the heart of the applicator is a hose pump which is actually 12 pumps in one. A revolving reel applies pressure to 12 short lengths of plastic hose, creating pumping action in the same manner as milking a cow. If less than 12 outlets are required, hose may be ganged with "Y" fittings. Interchangeable sprockets provide any desired rate of application. The rate is said to remain constant regardless of ground speed, providing positive control of amounts applied. Secure more details in free

Send me information on the items marked:

- ☐ No. 5448—Bag Seam
- ☐ No. 5461—Bag Manuals
- ☐ No. 5470—Truck Body
- ☐ No. 6415—Pyrethrum Booklet
- ☐ No. 6416—Soil Moisture
- ☐ No. 6417—Booklet
- ☐ No. 6418—Sprayer
- ☐ No. 6419—Applicator
- ☐ No. 6420—Potash Booklet
- ☐ No. 6421—Speedometer
- ☐ No. 6422—Brochure
- ☐ No. 6423—Applicator Kit
- ☐ No. 6424—Calcium Nitrate
- ☐ No. 6425—Aphid Control
- ☐ No. 6426—Liquid Fertilizer
- ☐ No. 6428—Grasshopper Film
- ☐ No. 6429—Formulation Pad

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS PERMIT No. 2 (Sec. 34.9, P. L. & R.) MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67,

Reader Service Dept. Minneapolis 1, Minn.

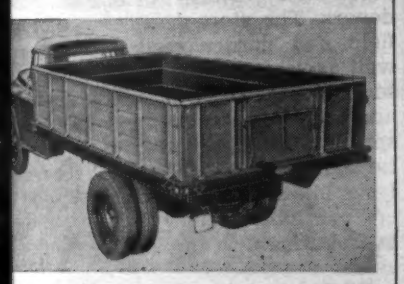
erature which is available. Check o. 6423 on the coupon and drop it the mail to Croplife.

No. 6417—Educational Booklet

The Manufacturing Chemists Assn., e., has prepared an educational oklet in behalf of the chemical instry, entitled "Frontiersman of the uture." "Young people who are consering the field of chemistry today ill have a hand in the shaping of morrow," according to the booklet. he contributions made by chemicals ch as in fertilizers, soil conditionrs, weed killers, insecticides and ant disease treatments, are described. "The demand for chemistry raduates has exceeded the supply r many years," according to the oklet. To secure the booklet check o. 6417 on the coupon and mail it Croplife.

No. 5470—Truck Body

A new product of the Mid West ody & Manufacturing Co. is an allteel farm truck body, called by the ade name, "Streamliner." Company okesmen said that the body utizes the "scientific forming of high rength, cold rolled steel for greater rength, longer life and less weight." heir statement continues: "The elded frame platform features 'Stix' construction which permits the



ody to absorb off-the-road stresses nd strains and yet remain grainght. 'Slip-on' stock racks are so signed that, in a matter of minutes he man can quickly convert the hit to a safe, sturdy livestock body, ith a choice of 'swinging' or 'slidg' livestock gate. Tip-top boards ay be added to increase grain cacity." More complete details may e secured by checking No. 5470 on he coupon and mailing it to this ublication.

No. 6422—Brochure

A 16-page brochure about its origin, ormation, operations and three subdiaries has been published by Minrals & Chemicals Corporation of merica. Also included are applicaons for the company's products, mong which are carriers and dilunts in pesticides and wettable powers, drying agents, catalysts and thers. Nearly 60 pictures illustrate he text. Free copies of the brochure re available by checking No. 6422 on he coupon and mailing it to Croplife.

No. 5461—Bag Manuals

Results of research into phases f multiwall packaging are now vailable for reference through a seies of manuals issued by the St. egis Paper Co. The manuals are esigned to aid in cutting costs by olving packaging problems, accordg to the Company's announcement. andbooks issued thus far include a alletizing manual, a multiwall bag apers manual and a printing manal. The palletizing manual describes ow multiwall paper bags are hanled as pallet and unit loads. It inorporates publications and material ade available by pallet manufacturg associations, fork lift manufacrers and others in the palleitzing eld. The identification and applica-

tion of the various papers available for use in multiwall bag construction is outlined in the multiwall bag papers manual. To provide a working knowledge of the types of printing processes and equipment, the printing manual reports on the many methods of printing now being used. Subject material includes types of inks and paper, printing plates and multiwall bag printing. Each of the manuals is illustrated with charts, photographs and drawings. To secure the manuals check No. 5461 on the coupon and mail it to this publication.

No. 6415—Booklet on Pyrethrum

"Facts for 1956 About African Pyrethrum" is the title of a booklet prepared by African Pyrethrum Development, Inc. The booklet's introduction states that the product's use as an insecticide gives qualities of quick knock-down, economy in lower concentrations with synergists, rapid dispersal and high penetration. Also included in the booklet are sections on Pyrethrum's background and how it is grown in Africa and processed from the Pyrethrum bloom, a flat white flower with a yellow center. Secure the booklet by checking No. 6415 on the coupon and dropping it in the mail to Croplife.

No. 6424—Calcium Nitrate

A detailed booklet titled, "Calcium Nitrate for Wheat Production in the Pacific Northwest," has been printed by Wilson & Geo. Meyer & Co. The booklet, researched and written by Harley D. Jacquot, formerly with the State College of Washington, Pullman, is intended as a guide for Pacific Northwest wheat growers. Covered are such topics as need for nitrogen fertilizer for wheat, soil and climatic description in the Pacific Northwest, moisture and soil relationships, nitrogen-protein correlation, nitrogen utilization, soil fertility, cropping system, crop sequence, wheat varieties, temperature, soil moisture, time of fertilizer applications, results of experiments and field trials and future potential needs of fertilizer. The booklet may be secured by checking No. 6424 on the coupon and dropping it in the mail to Croplife.

SALESMEN... to help boost YOUR profits!

LION Advertisements Sell LION Nitrogen, *and Your Mixed Goods, Too!*

Continuous Lion advertising appears in leading farm publications, month-after-month, to pre-sell the Lion brand to farmers—and to sell the value of *your mixed fertilizers as well!*

Current advertisements are appearing in Farm and Ranch-Southern Agriculturist, Progressive Farmer, The Farmer, Nebraska Farmer, Kansas Farmer, Prairie Farmer, Wallace's Farmer & Iowa Homestead, Wisconsin Agriculturist and Farmer, Missouri Ruralist and Missouri Farmer. All of these advertisements are in color.

Each Lion advertisement promotes the economic benefits of properly using fertilizers, including Lion Ammonium Nitrate, to help increase the farmer's profits. Each advertisement sells *hard* on the importance of soil tests in the intelligent use of all commercial fertilizers. Lion, a leader in nitrogen production, leads the way to good fertilization practices . . . to better profits for you!

LION'S QUALITY LINE OF NITROGEN FERTILIZER MATERIALS

LION ANHYDROUS AMMONIA—82.2% nitrogen. Quality guaranteed.
LION AQUA AMMONIA—Ammonia content above 30%—other grades to suit your requirements.
LION AMMONIUM NITRATE FERTILIZER—Improved spherical pellets. Guaranteed 33.5% nitrogen.
LION NITROGEN FERTILIZER SOLUTIONS—Various types to suit your particular manufacturing needs.
LION SULPHATE OF AMMONIA—White, uniform, free-flowing crystals. Guaranteed 21% nitrogen.

LION OIL COMPANY
A DIVISION OF MONSANTO CHEMICAL COMPANY
EL DORADO, ARKANSAS

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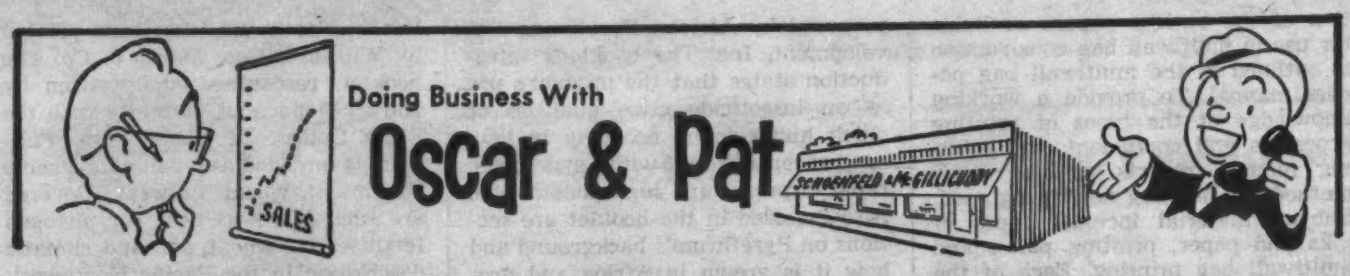


Doing Business With

Oscar & Pat

When Pat McGillicuddy came to the office that bright spring morning, he held the copy of the weekly newspaper under his arm. His face seemed sober and slightly stern, as he greeted Oscar and Tillie. Oscar glanced at the clock. It was 7:15 a.m. and his lips curled slightly.

Pat was 15 minutes late, and in the rush season. If a man was late 15 minutes every workday in the year, that amounted to more than 90 hours a year. Oscar knew, because he had figured it out several times. He knew exactly how many hours it cost the firm when Pat was late 15, 30 and 45 minutes. He had not gotten around to figuring on the basis of Pat's being one hour late.

Now Pat was sitting in his swivel chair, while Oscar busied himself with looking over the delinquent accounts. He would have to talk with the Irisher about them; he would have to get out and collect. He loved to sell, but when it came to collecting—

"Oscar," said Pat levelly. "I would like to have a little talk with you." There was something about his tone which made Tillie, the plump, nervous bookkeeper uneasy. As a precaution, she reached for an ulcer powder and chewed on it. Ann Hydrous, the maltese cat sleeping atop the stack of magazines on the old safe, opened an eye, surveyed the scene then tried to go back to sleep again.

"A talk?" Oscar said. "What about?"

Pat looked steadily at Oscar, his blue eyes glinting. "About this ad in the paper on insecticides. I had it laid out for a half page, then when it appears it is 2 columns 10 inches. I was out and you okayed the proof when it came back. What happened?"

"I cut it down," Oscar said tersely. "We are spending too much for advertising. Ach, we are spending too much for sales promotion. We could live for a year without that stuff. Ach, if I had my way—"

"But you haven't got your way," Pat said, his Irish blood evidently near the boiling point. "I happen to own half of this business, whether you like it or not. And I resent your cutting down that ad without telling me."

Oscar smiled coldly. "You just said we were partners. I got as much to say as you, so, ach, that makes it even, nein?"

"I don't agree," Pat said hotly. "Do I interfere when you order pencils by the gross and all the other office supplies? Do I?"

"Of course not," Oscar said proudly. "It is cheaper to order those pencils by the gross. We save a lot."

"Yes, but you do not need those pencils. They are very, very expensive."

Now it was Oscar's turn to look hurt. His eight finely sharpened pencils on his desk were his pride and joy, his tools to beat the ever mounting costs of business. They were his defense; his shield, his sword, and he was the knight in shining armor.

"Those, those pencils keep us from going broke!" he stuttered. "B-because you spend so much all the time."

Pat straightened slightly in his chair. "There is no need for you to buy pencils by the gross or even in half dozen lots. Suppliers give us lots of mechanical pencils to use. I've got a whole drawer full. They do not need sharpening."

"But I don't like them," said the rotund, balding Oscar. "I have always used these wooden pencils. I like them."

"Well, that shows you are old fashioned, that you do not keep up with the times," returned his partner sharply. "Think of the time you waste getting up from your desk and going to the sharpener to sharpen those pencils, about five times a day. That's our time you are wasting. You could be doing other things."

"But, I—" said the flabbergasted Oscar.

"And all the time you waste going around bending down and picking up paper clips and rubber bands," persisted Pat, almost cruelly. "What are you thinking about when you do that?"

"I-I want to save for us," Oscar said dazedly. "Why should they go to waste?"

"When you think about those little things you are not being an executive, Oscar. A good executive doesn't do things like that. He is thinking, planning, working—on big things."

"Ja," Oscar said bitterly, his soul smarting, "working on things so big he goes bankrupt, eh?"

Pat paid no attention. He stuck to the subject.

"And think of the time you waste for us by being mad when I don't get to work on time, even though I spend more night hours here than you do. You get mad at customers, at employees because they don't get as much work done as you want them to. Think of the time you waste walking out into the warehouse five or six times a day, spying on them. Small stuff, Oscar. You are no executive. You are a weasel, begorra." Pat always lapsed into an Irish brogue when angry.

"I don't care what you call me," Oscar retorted, his face red. "But you can blow all you like. I got more money than you, Minnie and me. My home is all paid for a long time ago. And I got savings bonds, and some good stocks, and other savings. That's more than you got. You live from day to day. Ach, I can see that."

Both men were breathing hard. They glared at each other across their desks which were back to back.

"So that is what you have been thinking all this time," Pat said coldly. "Everything is measured in terms of how much you got more than someone else. You and Minnie have no children. It is easy for you to save. Nora and I have six and we are educating them. And they do not go hungry. That is where my money goes."

"I do not care what you do in your private life," Oscar pointed out sharply. "Ach, I want to protect by investment and make a profit on it."

"Well, why not enjoy your money?" Pat asked. "Why don't you act like a human being at least in our business? You can't take your money with you, you know."

"Ach, but I like to have it as long as I can," choked Oscar. "I-I don't like to have the bill collectors hounding me all the time, like-like—" He broke off, tact for once asserting itself slightly.

Pat colored heavily. "Do you mean that I have collectors hounding me?" he said, half rising from his chair. "I—"

Both men looked up to see Tillie standing beside them, her straw hat on, her face pale and strained. "I quit!" she said. "I can't stand it any longer—you two fighting all the time. My ulcer gets worse every day."

Both partners suddenly looked aghast. Finally Pat spoke. "Why, Tillie, you can't leave us, can she, Oscar? Why-why you've been with us for six years. You're-you're just like one of the family."

Oscar said nothing. Mentally he was figuring how much money the firm would save if Tillie would go, and he would take over all the bookwork. But then he thought of how Tillie kidded with so many customers, visited with them, took their orders, etc., which he himself hated to do. He could do the bookwork, but not the other.

"Ach, we do need you, Tillie," he said slowly.

Tillie glanced from one partner to the other. "W-well, I really don't know what to do. I-I like it here, all except the fightin' you two do. I'll stay if both of you will promise not to fight."

Pat looked astonished and Oscar stubborn. "But that's askin' a lot, Tillie. Want to take the heart out of us?"

"Well," conceded Tillie. "If you must fight and argue, you've got to do it in the warehouse. Promise?"

"Put us on probation," Pat suggested. "For 30 days. Maybe we can stay out of each other's hair for that long. How about it, Oscar?"

Oscar was about to make some hot retort, but thought better of it. He merely grunted, and said, "Ach, we will see."

Texas Farm Products Host to 1,500 Dealers and Customers

NACOGDOCHES, TEXAS—Texas Farm Products Co. was host recently to 1,500 Lone Star feed and fertilizer dealers and customers from east Texas and Louisiana at the company's Lone Star Experimental Farm for a field day and barbecue.

Many of those attending also toured the Lone Star feed mill and new pelleted fertilizer plant, located at Nacogdoches.

At the farm, guests were given an opportunity to view the farm's pasture program, the registered beef and dairy cattle and British Yorkshire hogs.

M. S. Wright, Sr., president and founder of Texas Farm Products Co., welcomed the guests to the farm and explained briefly the company's aim in establishing the experimental farm three years ago.

NEW MEXICO APPOINTMENT

STATE COLLEGE, N.M.—John Daniel Gilpatrick, Modesto, Cal., has been appointed to the research staff of the botany and entomology department, New Mexico A&M College, Albert S. Curry, associate director of the A&M Experiment Station, has announced. Mr. Gilpatrick will work chiefly on measures for the control of seedling and other diseases of cotton.

Tennessee Store Aids Diversified Farming Program

Diversification of farm crops an farm income is stressed by the C lumbia Feed & Seed Store, Columbi Tenn., whose owners, Howard Ande son and W. C. Howell, do not hesita to point out to customers that fert lizer can greatly improve pastures fo dairy and beef cattle. While this primarily a tobacco and corn country farmers in recent years have gone for more dairying and cattle feedin as well as the raising of small grain

The owners of the Columbia far supply store are always willing t talk with farmers about ways i which good seed and fertilizer can in crease farm income and they cit some actual cases to prove thei point. Thus when a farmer hears ho another farmer in the same count increased yields of a certain cro through good fertilizer, he is ofte interested in doing the same.

The Columbia Feed & Seed Stor sells a lot of 3-9-6 and 6-12-12 ferti lizer for corn land, and 3-9-12 fo tobacco. A great deal of ammonium nitrate is used on wheat, oats and barley land, the owners say.

Although located in a busy littl city, the boyhood home of President James Polk, the store does more busi ness with farmers than with gar deners. The store does carry a lot o field and garden seed, however, as well as some vegetable plants in sea son. Many farmers have large gardens and orchards and buy insecticides and sprayers to get better crops. Some farmers have power sprayers for fruit trees and field crops and hand sprayers for garden use. The size of the average farm in the area is about 80 acres.

While some fertilizer is being sold to farmers for fall use, the bulk of the store's business is done in the spring.

Phosphate Fertilizers Help Prevent Bloat Of Farm Animals

CLEMSON, S.C.—Bloat of farm animals is a common occurrence in many parts of the world, especially in areas where soils are deficient in available phosphorus. It is frequently classified as either chronic or acute. A rich protein diet seems to be one of the predisposing factors in bloat.

Dr. H. P. Cooper, agronomist, South Carolina Agricultural Experiment Station, says bloat occurs only rarely from crops grown on soils which have received liberal applications of phosphorus or on soils where there is a geological accumulation of phosphorus in the soil.

On newly cleared land which has not received sufficient phosphorus to balance the nitrogen supply, bloat may be a critical problem. Legume crops grown in semi-arid climates on phosphorus-deficient soils may result in a very high incidence of bloat.

Dr. Cooper points out that phosphorus fertilization in many situations is a simple and very effective way to eliminate or reduce the occurrence of bloat on most of the typically normal zonal groups of soils.

PLANT PATHOLOGIST NAMED

STATE COLLEGE, N.M.—Harold Willis Wiedman, Oroville, Cal., has been appointed to the research staff of the botany and entomology department at New Mexico A&M College, Albert S. Curry, associate director of the College's Experiment Station, has announced.

Mississippi Dealer's Promotion of Farm Chemicals Based on Proper Use

There are a number of reasons why ardeners and farmers like to come to he Farmers Supply Co., Meridian, liss., to buy seeds, fertilizers and in- ecticides.

One of the reasons is that they ave learned from experience that the rm carries quality merchandise and he staff is friendly and capable. An- ther reason is that farmers know hat J. B. McInnes is a man who nows his products well. He was a rmer newspaperman who later be- ame a vocational agriculture teacher r 18 years. In his college days he najored in entomology.

Now, Mr. McInnes is putting his pecialized education to work in see- ng that farmers get the right ferti- zers and insecticides to help them roduce better crops. And he spends great deal of his time out in the eld consulting with farmers about rop problems.

In addition to selling these prod- cts locally, Mr. McInnes also has a 0-county distributorship for insecti- ides, seeds and some veterinary sup- lies, and he has two salesmen who over this wide territory for him.

"This distributorship experience helps us a great deal from a retail angle here in Meridian," says Mr. McInnes, "because we know what these insecticides are doing in vari- ous areas. Naturally we are able to recommend specific insecticides to our customers with greater con- fidence as a result of this experi- ence."

Mr. McInnes sponsors a 15-min. aily radio program over a local sta- on. News, markets and weather re- orts are given and the program has wide audience. The program costs bout $2,000 per year, he reports. In ddition, he does newspaper and di- ect mail advertising on fertilizers, eeds and insecticides. His ad budget ns slightly over 1%.

However, being a former news- aperman he realizes the value of ublicity and advertising and is nown as a consistent advertiser in he area. His program, he reports, ins many new customers and helps im serve regulars better by keeping hem informed of advances in feeds, ertilizers and insecticides.

"With so much new information coming out constantly about in- ecticides especially," reports Mr. McInnes, "we find that advertising does a good job of keeping our cus- tomers informed about the better products which they can buy to produce better crops, relatively free rom insects and other growth re- arding factors."

This dealer pays much attention to eed merchandising, In spring and ummer, a long center strip in his tore is devoted to the display of a ultitude of garden and field seeds, ost of it in large bins in a well con- ructed wooden display rack. This n which has tilted sides that permit he seeds to be clearly visible to cus- mers, has a central serving area. A rotating scale is in the center of he seed display, so that employees an use it from either side by rotating . Mr. McInnes states that most seed stomers buy fertilizer, especially ose who purchase garden seeds. "The psychological advantage of a od seed department lies in the fact at when farmers and gardeners see ers buying seeds, especially on sh days, they get into the buying od, too," says Mr. McInnes. "Seeds ng many new customers into the re who are potential customers for rtilizer and other farm products." The firm also operates seven feed ates in the area, and salesmen who cover them are also able to sell quite a bit of fertilizer and insecticides during the season. To back up such route selling of fertilizers, Mr. McInnes sends out letters soliciting fertilizer business, and enclosing return postage order cards. Sometimes the farmers fill out the cards, ordering what they want and hand them to the route salesman. Others will consult with the route salesman and talk over fertilizer needs before mailing the card in or giving it to the salesman.

In connection with the feed business, the firm also has small feeder educational meetings, usually at the homes of customers. If the meeting concerns the selling of feeds, and the time of the meeting happens to be the fertilizer season, the man conducting the meeting devotes a little time, too, to fertilizer requirements.

"While fertilizer is a highly competitive item in this section, with considerable discounting at times, it is an item which farmers need and buy in large quantity," says Mr. McInnes. "There are many other sales which are related to fertilizer sales, and so we are always anxious to sell as much fertilizer as we can, despite the small margin."

The firm has a display of some products, including key insecticides on an inset shelf in the center of the main wrapping counter which faces the aisle. Customers who step up to this counter can't help seeing some of these products, including weed killers. Many impulse sales are made from this display. It is interesting to note that the display shelf is made from an area which in most stores is not utilized for display, but which is often just an expanse of wood.

Washington County Pasture Day Scheduled

JONESBORO, TENN.—The fourth annual pasture and hay day of Washington County, Tennessee will be held June 25-26, according to Raymond Rosson, county agent, and Edward M. Henry, special agent in test demonstration.

On June 25 the group will visit two farms before lunch and two farms in the afternoon. On June 26 it will make a trip to Roan Mountain.

PENCO®
ENDOTHAL
HARVEST AID®

for DESICCATION • for DEFOLIATION

Can help increase yield, save time, reduce loss

AS A DESICCANT

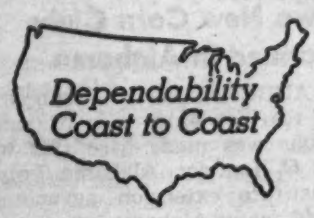
PENCO Endothal Harvest Aid has been found to be excellent for drying standing seed crops in the field. It acts as a chemical "frost", stops plant growth, dries out the plant and seed. It allows direct combining of crops. Its application has been known to increase yield, reduce seed loss and save time ordinarily consumed in windrowing and handling. It is a liquid spray formulation . . . for application by ground equipment or airplane.

Use PENCO Endothal Harvest Aid as a desiccant (drying agent) for such seed crops as alfalfa, clovers, oats, rice, corn, beans, soybeans and grasses.

AS A DEFOLIANT

PENCO Endothal Harvest Aid is a true defoliant for cotton, ramie and castor beans. It is a water base formulation that increases turnout. If rain does not occur within six hours after spraying, defoliation will be obtained regardless of rain later on. For defoliation of nursery stock, use Endothal Nursery Defoliant which is also a true defoliant.

Endothal is the accepted generic name for 3, 6-endoxohexahydrophthalic acid. The manufacture and use of Endothal products are covered by one or more of the following U.S. patents: 2,550,494; 2,576,080; 2,576,081; 2,576,083; other patents pending.



WRITE FOR service bulletins and for specific technical information on the use of PENCO Agricultural Chemicals. Contact the nearest Pennsalt office.

PENNSYLVANIA SALT MANUFACTURING COMPANY OF WASHINGTON

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Berkeley, Calif. • Los Angeles, Calif. • Montgomery, Ala.
Philadelphia, Pa. • Portland, Ore.

Pennsalt Chemicals

FARM SERVICE DATA

Extension Station Reports

Tests conducted by the University of Arkansas' Agricultural Experiment Station show that there is considerable variation in the response of rice to fertilizer practices.

Studies to determine more efficient fertilizer practices were conducted at the Rice Branch Experiment Station, Stuttgart, and on outlying farms during the two years 1954 and 1955. Dr. R. L. Beacher of the Experiment Station staff was project leader.

Tests on the outlying farms showed a large amount of variation on the different soils. This points out the importance of rice farmers having the soil on their farms tested before applying fertilizers, according to Dr. Beacher. Such soil tests are made by the Arkansas Agricultural Experiment Station Soil Testing and Research Laboratory.

Experiments at the Rice Station comparing rates of nitrogen showed that Zenith rice growing on old rice land made poor response to rates higher than 80 lb. of nitrogen per acre because of severe lodging. However, Bluebonnet 50 yields continually increased with increased rates up to 160 lb. of nitrogen per acre without serious lodging. Outlying experiments on more fertile soils indicated the desirability of applying less than 80 lb. of nitrogen on soils that are shown to be medium to high in fertility in soil tests. Rice responded better when it was rotated with other crops rather than grown on the same ground continuously.

Urea was more effective when applied just before the second flood than before the first flood. No advantage was gained by split applications made before first and second flooding.

On unfertilized plots, early flooding when about two-thirds of the rice seedlings had emerged resulted in slightly higher yields than normal flooding. This was not the case on fertilized plots. Continuous flooding resulted in slightly higher yields than two floods with a drainage period on unfertilized plots. The reverse was true on fertilized plots, however.

★

Timing irrigation to critical growth periods of tobacco and corn, in Virginia experiments during the last two seasons, provided more efficient use of water and yield increases comparable to those obtained with full-season irrigation, the U.S. Department of Agriculture reports.

Research conducted near Blacksburg by cooperating engineers and soil scientists of the department's Agricultural Research Service and the Virginia agricultural experiment station demonstrated that irrigating burley tobacco only during its period of rapid vegetative growth—from the time plants are knee-high until they are in bloom—gives yields as high as those under full-season irrigation.

Highest corn yields were produced in the tests when this crop had full-season irrigation. However, when irrigation was limited to the period from tasseling through the milk stage, yields were 80 to 90% as high, and in terms of inches of water applied were achieved more efficiently.

Although highest yields are generally assured by irrigating whenever available soil moisture becomes low, these tests show that important yield increases can be obtained by timing the use of water to critical periods, thereby conserving the supply and reducing the cost of water.

In two years of research (1954-55) with burley tobacco, water was applied by sprinkler only when the moisture available to the plant roots from the top 18 inches of soil was reduced 50% below soil moisture capacity. In comparing the extremes—irrigation during the critical growth period and all-season irrigation—yields obtained were as high with the first method as with the latter, and less water was required—2 inches less the first year, 4.6 inches the second.

In 1954-55 trials with corn, irrigation whenever soil moisture dropped below 50% gave the highest yields—115 and 128 bu. per acre—but at a cost of 10 and 10.5 inches of irrigation water. When irrigation was confined to the critical growth period, yields for the two years were 102 and 104 bu. per acre, and water use amounted to 3 and 5.3 inches. Non-irrigated corn yields were 65 and 82 bu.

In terms of extra bushels per inch of irrigation water, all-season irrigation provided 6.1 and 3.4 bu. of corn; critical-period irrigation provided 12.6 and 4.3 bu.

★

Most farmers who consistently make high yields of corn have a formula. They simply make use of the fact that nitrogen will make extra corn in fields where adapted varieties and good production practices are used.

O. N. Andrews, Alabama Polytechnic Institute extension agronomist, said recently that with such conditions and with normal weather, two pounds of nitrogen will ordinarily produce about one bushel of corn, up to the recommended amounts of the element. On most Alabama soils, 60 to 90 lb. of nitrogen per acre can be used profitably; with irrigation and other particularly favorable conditions, even higher rates will often pay off.

★

Fertilization may influence the irrigation needs of cotton, H. O. Vaigneur, associate agricultural engineer of the Sandhill Experiment Station near Columbia, S.C. has pointed out.

"Recommendations for fertilizer are usually given for optimum rainfall conditions," according to Mr. Vaigneur. "In tests where high rates of fertilizer were used with a deficiency of moisture, the yield was lowered considerably.

"During the 1954 season with 7.9 inches of rainfall (April-Sept.) the fertilizer rates were 800 to 1,600 lb. per acre of 8-12-12. Yields of seed cotton without irrigation were reduced by the highest fertilizer application from 870 to 731 lb. an acre.

"With five irrigations of 1.7 inches each, the yields of 2,086 and 2,279 lb. per acre were in order of the rate of fertilizer application."

He added that problems of insect control are not unduly increased by moderate irrigation. Extra fruiting of plants with ample soil moisture, over those in dry soil, offsets the tendency toward increased activity of the boll weevil and other insects caused by the greater supply of moisture.

WEEKLY TV PROGRAM

(Continued from page 9)

Wylie, Jefferson County agent; Runyon Deere, extension service, and Howard Chambliss, Pine Bluff farmer, would talk on and discuss "Irrigating and Fertilizing Cotton."

"We find that these reminder cards help build up the audience for such programs," states Mr. George Dunklin. "Farmers are as busy as anyone else these days, and they may forget a program unless reminded."

Customers are also invited to see the Johnny Holmes program "live," and many farmers avail themselves of this opportunity. Many farmers also appear on Johnny's programs giving their experiences on the farm with certain crops and this adds variety and interests to the program.

In his program Johnny is constantly reminding farmers that they are not using the recommendations of experiment stations to their fullest extent in fertilizing their lands. If the time comes when Arkansas farmers fertilize up to minimum recommendations, they will produce much more, he points out.

For instance, he tells his listeners, that Dr. Robert Beacher of the soil testing laboratory of the University of Arkansas tested soils in 66,000 fields and found that they needed on the average 50 lb. of N, 29 lb. of P_2O_5 and 27 lb. of K_2O. Average consumption figures in Arkansas indicate that farmers use 20 lb. N per acre, 12 lb. P_2O_5 and 14 lb. of K_2O. This means, he says, that the average farmer is using less than half of recommendations for his soils.

A total of about 130,000 tons of fertilizer is now used in Arkansas, whereas over 500,000 could be used if farmers fertilized up to the recommendations.

"I realize that many farmers cannot attend all the demonstrations put on by county agents or others, as well as farm meetings," says Johnny. "So I take a lot of films of these events and show parts of them on the TV program. Farmers appreciate this type of service, for they like to keep up on what is happening in agriculture in this area. This builds up the daily audience for the program, too."

During the other four days of the week, other firms interested in agriculture sponsor the Johnny Holmes farm programs. Thus he is kept busy all the time gathering more facts about Arkansas agriculture to give to his farm listeners.

"We are well pleased with our sponsorship of the program on Thursdays," states Mr. Dunklin, "because folks respect Johnny and what he tells them. Then, with the lineup of prominent speakers on various agricultural subjects, we have a program which gives the farmer plenty for his listening and viewing time."

Two New Corn Clubs Formed in Alabama

AUBURN, ALA. — Announcement of two new state-wide Alabama corn clubs was made here this week by J. C. Lowery, Alabama Polytechnic Institute extension agronomist. He said many Alabama growers are expected to become members of the 1,000-Bushel Corn Club and the 30-Ton Corn Club on the basis of their 1956 crops. A farmer can qualify by producing either 1,000 bu. or 30 tons of corn on 12 acres of land.

Mr. Lowery said farm leaders in many parts of the state will encourage growers to try for certificates in the clubs in order to promote higher, more profitable yields on Alabama farms.

Fertilized Crops Suffer Less From Lack of Moisture

COLLEGE STATION, TEXAS—Crops suffer more from lack of moisture on fields of low fertility and normal rainfall than on fields of high fertility and low rainfall.

C. H. Bates, Texas A&M extension farm management specialist says, "with most prices down from a year ago and with acreage allotments on a more restrictive basis the need for getting the most for the least cost per unit is more urgent. On many farms and ranches fertilizers may provide a part of the answer to maintaining output without raising costs."

The old saying that soil is drier now than it was 15 to 20 years ago, has a real basis for truth according to research agronomists. They say this is due to fertility depletion and reduction of organic matter.

On sandy upland soils around College Station, research is being done with fertilizers. In one area, soil was limed, given a broadcast fertilizer treatment and sprigged to Coastal Bermuda in June of 1953. In 1954 measurements of hay yield were made.

Where no extra nitrogen was applied it required almost 18 inches of water to produce a ton of hay. Where 800 lb. of nitrogen was applied, less than 5 inches of water was required to produce a ton of hay.

These results make it quite evident, says Mr. Bates, a lower productivity level requires a much higher amount of water to produce a unit of hay. Returns on the investment are $2 for each $1.00 spent up to 400 lb. of nitrogen. Up to 650 lb., returns in extra hay gave $1.23 for each $1 spent.

Kentucky Fertilizer Sales Increase Noted

LEXINGTON, KY. — Kentucky mixed fertilizer sales increased from 65,000 tons to more than 400,000 tons in the last 16 years, a boost of more than six times, according to a report issued by the state Department of Feed and Fertilizer.

Plant food in mixed fertilizers exhibited approximately a 10-fold increase during this period. Climbing from 11,100 tons in 1940 to 109,500 tons in 1955, the 1955 tonnage was but little under the all-time record of 117,000 tons of plant food in mixed fertilizer in 1954.

Individual plant food increases in mixed fertilizers are: Nitrogen, 1,900 tons to 18,000 tons, an increase of nine times; available phosphoric acid, 5,900 tons to 46,500 tons, an increase of eight times, and potash, 3,300 tons to 45,000 tons, an increase of almost 14 times.

Average composition of mixed fertilizer has risen from 17.0 units of plant food in 1940 to 26.3 units in 1955. The average analysis has changed from 2.9-9.1-5.0 in 1940 to 4.4-11.2-10.7 in 1955.

Fertilizer materials tonnage, exclusive of raw rock phosphate and basic slag, doubled in the same 16 years. With less than 50,000 tons in 1940, the figure stood at under 100,000 tons in 1955 although a "high" of 175,000 tons was reached in 1950.

Plant food applied as straight material in 1955 was approximately three times the amount used in 1940. Individual plant food increases for fertilizer materials are: Nitrogen, 540 tons to 10,000 tons, an increase of about 20 times; available phosphoric acid, 8,700 tons to 11,400 tons, and potash, 280 tons to 9,700 tons, an increase of 34 times.

What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

Results of a survey sent out to 48 states and U.S. territories by Rodney Barry, state chemist of Virginia, indicate that the use of fertilizer and esticide mixtures is growing throughout the nation. More states than ever efore report that such mixtures are legal and are being used in increasing nnages within their borders.

United Heckathorn Co., Richmond, Cal., was awarded a contract for spraying 180,000 acres in Florida for control of the Mediterranean fruit fly which had infested a strip 10 miles wide and 35 miles long. Three applications of malathion were to be made, and soil applications of dieldrin and heptachlor will also be made in some areas.

A fertilizer consumption report issued by the National Plant Food Institute showed a decrease of 1.3% in overall tonnage for the calendar year 55, as compared to the previous 12-month period. However, due to the anufacture of increasingly high analysis mixed fertilizers, the plant food ntent of the total was expected to show a slight increase. The total tonge of fertilizers, as compiled by the Institute, was 20,416,410 tons. The evious high, in 1954, was 20,679,026 tons.

Although tonnages of fertilizers shipped thus far in the 1956 season do t measure up to those of last year, still the nutrient content of these aterials was expected to hold up because of higher grades of mixtures. hus indicated the U.S. Department of Agriculture in its supplemental report the fertilizer situation for 1955-56. Trade observers, however, predicted at much of the tonnage loss may be made up later in the season.

A frost of record proportions was expected to damage New England crops to the extent of $10 million, according to reports from the states comprising this group. Crops affected by the frost included strawberries, sweet corn, peppers, beans, cucumbers, spinach and tomatoes.

International Minerals & Chemical Corp. announced that it would build factory for the production of chemical plant food mixtures at Fairfax, inn. The announcement was made by Maurice H. Lockwood, vice president charge of the IMC plant food division. The new plant was expected to be production in time for the 1957 season.

New approaches to weed control were discussed at the recent weed ntrol conference held at Rutgers University, New Brunswick, N.J. USDA d University experts described the results of recent tests with various emical compounds.

The new farm bill was regarded as a potential boon to the plant food industry, since the bill's provisions would encourage the use of fertilizer to achieve greater production on fewer acres, particularly in the corn belt states.

Results of two long-term U.S. Department of Agriculture studies on il-saving practices showed that crop yields on reclaimed land could be eatly increased through the rebuilding of eroded slopes and increasing rtility levels through the application of plant foods. The tests were made the vicinity of Waco, Texas.

The farm bill passed by Congress was expected to act as a stimulus to rtilizer sales in the U.S., according to USDA interpretations. However, a ntroversial issue was seen in the question of whether or not USDA would rmit commercial corn belt farmers to comply with the original acreage lotment of 43 million acres, or the higher 51 million acre allotment, in der to participate in the soil bank program as outlined in the bill.

The Maryland Governor's Safety-Health conference at Baltimore devoted an entire day to fertilizer safety. Speakers included Curtis A. Cox, Virginia-Carolina Chemical Corp., Richmond, Va., national chairman of the fertilizer section, and representatives of the National Plant Food Institute and the fertilizer manufacturing trade.

Albert L. Taylor was named to succeed Dr. Gotthold Steiner, as head of ant nematology research in the U.S. Department of Agriculture. Dr. Steiner cently retired after a career of 34 years in the department.

Emphasis was placed on the specificity of pesticides of the future, by eakers at the recent Western Agricultural Chemicals Assn. meeting at Los ngeles. Speakers described newly-developed insecticides, fungicides and weed llers.

The annual U.S. Department of Agriculture report on the pesticide situaon for 1956, confirmed what has been voiced around the industry for some me: namely, that the supply situation for this year is ample. Further, howver, the report predicted a good season ahead, based on information received out the presence of unusual numbers of over-wintered pests in different eas of the country.

The crop reporting board announced that the average yield of lint cotton in 1955 had been 417 lb. an acre, which set a new record for the third consecutive year. This figure was 76 lb. above the previous record set in 1954, and was 138 lb. above the average.

Plans to apply grain protectant insecticides to some ten million bushels stored Commodity Credit Corp. corn were announced by USDA. The Dertment purchased some 3,600 gal. of concentrate for the purpose. Successlow bidder was Thompson-Hayward Chemical Co., Kansas City, Mo. Price s $24.46 a gallon.

Production capacity for phosphoric acid from both phosphorus and by t process, totaled 1,764,737 tons P_2O_5 equivalent on January 1, the U.S. partment of Commerce announced. The reported scheduled expansions both types of acid are expected to raise capacity to more than two million s P_2O_5 by the middle of 1957, the report said.

Best Fertilizers Co. announced it had started on a $1 million expansion its fertilizer plant near Lathrop, Cal. . . . Potash deliveries by seven jor American producers during the first quarter of 1956 were 3% lower n those in the corresponding period a year earlier.

To make your selling job MORE PROFITABLE!

...outstanding performance for your customers.

Good product performance means satisfied customers who keep coming back to you for their needs. And Phillips *66* Ammonium Nitrate delivers *outstanding* performance. It is guaranteed to contain 33.5% nitrogen, and is prilled to flow freely, handle easily. New multi-wall polyethylene bags (80 and 100 lb.) help to preserve free-flowing quality.

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EXTRA PHILLIPS *66* BENEFITS!

You'll benefit from the many extras you get from Phillips *66* service—in prompt deliveries and personal service from your Phillips *66* fertilizer field man.

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INDIANAPOLIS, IND.—1112 N. Pennsylvania St.
KANSAS CITY, MO.—500 West 39th St.
MINNEAPOLIS, MINN.—212 Sixth St. South
NEW YORK, N. Y.—80 Broadway
OMAHA, NEB.—WOW Building
PASADENA, CALIF.—604 Citizens Bank Bldg.
RALEIGH, N. C.—804 St. Mary's Ave.
SALT LAKE CITY, UTAH—68 South Main
SPOKANE, WASH.—521 E. Sprague Ave.
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. . . for richer sales fields . . . this Fall!

MEMO

TO: Advertisers to the Fertilizer Industry

SUBJECT: CROPLIFE's Fall Fertilization Special Issue of July 23

Every advertiser interested in the fertilizer industry has a big stake in the promotion of fall fertilization. CROPLIFE, the only weekly newspaper serving the agricultural chemical industry, will publish a special **"FALL FERTILIZATION" issue**—July 23, 1956—which will editorially feature this important subject, and provide an unprecedented opportunity to place before the industry and midwest dealers **your advertising message!**

Here's a capsule preview of this special issue:

Fall Fertilization: discussion of economic advantages and agronomic aspects involved in fall application . . . of problems faced by industry in trying to manufacture and store adequate amounts of plant food materials and then attempting to deliver year's output in brief spring period . . . photos showing spring jam of trucks and farmers "fighting" for supplies of fertilizer . . . plus tie-in editorial comment on wastefulness of this buying pattern . . . a graphic presentation of Dr. Firman E. Bear's map showing areas where soil is adaptable to fertilizer application in the fall.

Agronomists Express Viewpoints: statements of college and industry agronomists on fall fertilization.

Directory of Available Sales Helps: special section of July 23 CROPLIFE will feature an illustrated "catalog" of sales aids available to dealers from fertilizer suppliers . . . descriptions of materials geared to help dealers promote fall application of fertilizers . . . sources of newspaper ad mats, store banners, window decals, mailing pieces, counter displays and allied point-of-sale material.

Question-and-Answer Feature: dealer-readers of the July 23 CROPLIFE will find accurate replies to questions and/or objections of farmers on fall fertilization in a comprehensive "question-and-answer" page.

How One Dealer's Idea Clicked; one of the highlights of CROPLIFE's "Fall Fertilization" issue will be an attention-compelling article—a true "success story"—of the unique ways a Midwest dealer promoted sale and application of fertilizer during fall months.

PLAN YOUR ADVERTISING NOW!

Plan your advertising now for CROPLIFE's special "FALL FERTILIZATION" issue! An unusual opportunity to tie-in with great news and feature coverage of a timely and important subject. Contact your nearest CROPLIFE office for complete details and any service our sales representatives can offer.

DATE OF ISSUE: **July 23, 1956**

ADVERTISING DEADLINE: **July 9 (Monday)**

NEW YORK
551 Fifth Ave.
MUrray Hill 2-2185

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2272 Board of Trade Bldg.
HArrison 7-6782

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612 Board of Trade Bldg.
Victor 2-1350

WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

ertilizer Use Climbs

The world is using more and more rtilizer. Proof of this is not required the trade for its members are fully ware of the greater acceptance of e value of fertilization among farm- s. But the Food and Agriculture rganization of the United Nations s produced figures and facts illus- ating just how the business has own in the past 18 years.

World consumption, FAO states, s jumped from 8.4 million metric ns in 1938 to 17.9 million tons in e 12 months ended June 30, 1955. the U.S., consumption has more an quadrupled at 5,469,000 tons ainst 1938's 1,311,000. Yet Amer- an farmers use less fertilizer to the re than do those of several other untries.

The highest consumption figure in e world, FAO reports, is New Zea- nd with the Netherlands, Hawaii, elgium and Japan following in that der.

The business is still growing and e peak of acceptance is not yet in ght.

anadian Potash

The announcement that the Sas- tchewan government has granted a thdrawal permit for large potential tash acreage to Robert Campbell d associates, Vancouver, is further idence of the increasing interest in e potash fields of that province.

Under withdrawal is about 300,000 res in the Melville area in east- ntral Saskatchewan extending rthwest to the Ituna and Kelliher eas.

Mr. Campbell plans to start active illing this summer. The exploratory rt of the program will involve sink- g six test holes to determine the st location for a large shaft. In this illing, a chemical solution will be ed to obtain the potash cores, a ethod claimed to have been used ccessfully by German industrialists.

If the exploratory phase is suc- essful, Mr. Campbell expects to tart sinking the mining shaft in he spring of 1957. Financing for he whole project is expected to be ompleted by the end of this year.

This entry into the field brings to the number of companies active in veloping potash in Saskatchewan. wo are at the shaft-sinking stage— otash Co. of America near Patience ake, some 14 miles east of Saska- on and the Western Potash Co. near nity, about 120 miles west of Saska- on. (See Croplife Oct. 17, 1955, ge 1).

dian Super

The consumption of superphosphate India at the present time is in the gion of 100,000 tons of 16% super- osphate. The target set by the gov- nment of India under the second e-year plan for achievement by 60-61 is 720,000 tons, according to S. Sitharamiah, secretary of the rtilizer Association of India.

Mr. Sitharamiah says that the te of progress depends on many ctors. Only in the southern por- on of the country is superphos- hate generally accepted by the griculturalists. In the remainder f the country it will be necessary run educational programs to ersuade the farmer that it is in s own best interests to fertilize. t the same time, the industry ust set up a selling organization to meet the demand as it is created. No such organization exists at present.

Mr. Sitharamiah says that no difficulty has been met in fulfilling all demands for rock phosphate through the private trade. Imports are coming in from Jordan, Safaga and Kosseir. Makatea and Moroccan phosphates are also available.

U.K. Officials

M. N. Gladstone, Fisons Pest Control, Ltd., has been appointed chairman of the Association of British Insecticide Manufacturers. George Huckle, Shell Chemical Co., Ltd., is vice chairman. Both will serve for the 1956-57 association year.

The association has recently published a new directory of British insecticides, fungicides and weedkillers. The publication also contains a section listing firms alphabetically, a directory of products and services, and a department listing proprietary and trade names and marks.

Copies can be obtained on application to the association's headquarters at Cecil Chambers, 86 Strand, London W.C.2.

New Nitrogen Plants

Aikman (London), Ltd., the British brokerage firm, reports that many new nitrogen plants are being planned in various parts of the world. The firm estimates that by 1959 European capacity may be upped by 200,000 tons. Increases of 100,000 tons are forecast in Eygpt and Near Eastern Countries, 250,000 tons in India and the Far East and 100,000 tons in South America and South Africa.

U.S. Exports

Aikman does not think that U.S. firms stand much chance of unloading their surplus production in Europe. Because of the big rise in freights, the American producers would have to fix their selling prices at $10@15 ton less than the European f.o.b. price to compete in the European importing markets.

NOPCO APPOINTMENT

RICHMOND, CAL.—Nopco Chemical Co. has appointed D. E. Murphy as a new member of its technical sales staff, according to J. B. Connell, industrial chemicals sales manager of Nopco's Pacific Division, who made the announcement. Mr. Murphy has been assigned to the Southern California sales district, and will make his headquarters in Los Angeles.

NOW ON STREAM!

Escambia Bay Chemical Corporation, Pensacola, Florida — the only plant of its type on the Gulf Coast, east of New Orleans!

NOW PRODUCING A CONTINUOUS SUPPLY OF ANHYDROUS AMMONIA, NITRIC ACID, BAY-SOL NITROGEN SOLUTIONS, AND—

AMMO-NITE

AMMONIUM NITRATE FERTILIZER

Containing 33.5% Nitrogen

Sell AMMO-NITE . . . and you can offer your customers *more* Nitrogen for *less* money than other plant food forms. Simple arithmetic proves it! More Nitrogen in every bag means less bulk and weight for you and your customers. Uniform AMMO-NITE prills flow freely, spread evenly — never clog or stick in the spreader. AMMO-NITE leaches far less, too! New *stay-dry* bags keep AMMO-NITE in perfect condition in any weather. Order now. *It's a money-maker!*

GROW IT RIGHT WITH AMMO-NITE!

Products of the Escambia Bay Chemical Corporation, Pensacola, Florida, are distributed exclusively by

ASHCRAFT-WILKINSON COMPANY, Atlanta, Georgia

Fertilizer Consumption in the United States

(See reference 1 below)

STATE	TOTAL CONSUMPTION (Short Tons) 1945	1951	1952	1953	1954	1955[2]
NEW ENGLAND	500,190	459,007	474,788	469,153	423,408	432,278
Maine	234,581	172,219	216,917	211,287	178,751	180,161[3]
New Hampshire	22,327	23,280	16,589	20,291	16,274	18,332
Vermont	45,340	66,164	46,186	50,582	40,368	46,816[3]
Massachusetts	89,257	86,620	95,448	85,454	85,917	84,516
Rhode Island	16,980	17,419	16,309	14,299	14,132	15,246
Connecticut	91,705	93,305	83,339	87,240	87,966	87,207[3]
MIDDLE ATLANTIC	1,242,521	1,486,299	1,514,182	1,497,597	1,549,930R	1,575,320
New York	531,929	625,000	631,250	640,000	588,800	617,699[3]
New Jersey	245,173	246,710	270,505	252,904	285,660R	281,030
Pennsylvania	465,419	614,589	612,427	604,693	675,470R	676,591[3]
EAST NORTH CENTRAL	2,081,813	3,388,970	3,914,399	4,140,033	4,083,864R	4,036,342
Ohio	635,325	930,463	1,113,968	1,107,895	1,008,400	1,088,467
Indiana	367,936	891,635	1,049,415	1,106,722	1,161,909	1,099,942
Illinois	270,243	646,668	792,162	919,638	897,322	801,074
Michigan	340,066	540,901	601,205	598,532	593,965R	651,319
Wisconsin	268,243	379,303	357,649	407,246	422,268	415,540
WEST NORTH CENTRAL	490,584	1,330,295	1,570,818	1,821,747	2,070,373	1,950,262
Minnesota	107,363	200,936	212,701	279,229	313,238	369,145
Iowa	145,033	396,263	402,613	579,327	609,868	546,594
Missouri	193,253	465,319	570,886	562,928	649,730	559,262
North Dakota	3,300	20,880	34,128	41,158	48,643	58,693
South Dakota	325	7,651	11,201	19,908	31,381	35,314
Nebraska	3,125	77,595	100,848	144,521	191,452	171,924
Kansas	38,185	161,651	238,441	194,676	226,041	209,330
SOUTH ATLANTIC	5,365,945	6,438,237	6,838,414	6,709,887	6,598,710R	6,743,630
Delaware	49,000	69,797	81,239	85,000	94,536R	94,084
Maryland	218,288	272,292	286,687	295,104	309,639	308,549
D. C.	1,500	2,000	2,400	2,500	2,700	2,800[3]
Virginia	628,468	807,359	845,721	799,548	776,786	798,227
West Virginia	59,527	103,027	96,334	84,188	73,816	87,381
North Carolina	1,530,276	1,766,479	1,872,685	1,820,622	1,824,352	1,791,258
South Carolina	823,078	938,936	971,565	956,251	886,654	911,576
Georgia	1,138,492	1,273,136	1,393,985	1,386,162	1,372,284	1,299,654
Florida	917,316	1,205,211	1,287,778	1,280,532	1,257,943	1,450,101
SOUTH CENTRAL	2,813,568	4,465,111	4,483,104	4,207,001	4,486,157	4,006,214
Kentucky	404,684	559,274	599,643	549,692	574,197	505,302
Tennessee	374,961	608,969	595,078	563,334	580,206	496,971
Alabama	780,871	1,094,648	1,115,893	1,040,500	1,196,628	1,039,160
Mississippi	536,859	764,051	707,473	654,805	710,298	642,428
Arkansas	155,206	415,091	365,528	398,063	374,601	331,093
Louisiana	269,860	302,623	335,805	292,907	328,814	292,066
Oklahoma	30,872	152,279	181,901	146,093	131,390	133,517
Texas	260,255	568,176	581,783	561,607	590,023	565,677
WESTERN	707,082	1,258,188	1,280,817	1,385,363	1,466,584R	1,652,364
Montana	8,000	18,000	20,000	26,000	27,000	27,760[3]
Idaho	34,086	60,000	50,000	74,000	75,000	88,425
Wyoming	4,400	6,500	7,000	11,800	12,000	11,206[3]
Colorado	18,055	49,695	44,233	48,354	46,458	48,659[3]
New Mexico	8,048	20,015	22,722	24,829	22,475	27,368
Arizona	29,453	106,960	109,234	116,047	135,481	145,354
Utah	8,906	30,053	25,513	32,420	22,379	25,522
Nevada	750	2,691	2,874	3,813	2,971	2,457
Washington	62,449	86,147	91,488	122,101	159,941R	172,975
Oregon	45,234	100,350	119,695	122,999	131,309R	137,328
California	487,701	777,777	788,058	803,000	831,570	965,310
UNITED STATES	13,201,703	18,826,107	20,076,522	20,230,781	20,679,026R	20,416,410

[1] Includes TVA farm test demonstration program and ACP distribution.
[2] Preliminary—Subject to revision.
[3] Estimated; margin of error may be large.
R Revised.

FERTILIZER CONSUMPTION—Fertilizer consumption in the U.S. during the calendar year 1955 totaled a near-record 20,416,410 tons, according to a National Plant Food Institute study released last week. (See Croplife, June 11, page 1). Although this 1955 total represents a decrease of 1.3% from the all-time record of 20,679,026 tons in 1954, indications are that consumption of actual plant food continued to increase, NPFI said. Shown above are state and regional consumption figures for 1955 as released with the NPFI study.

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SAFETY

(Continued from page 2)

the inspector or repairman should be protected by providing a continuous flow of fresh air through the vessel.

(8) A rescue harness and lifeline should be worn. The loose end of the attached lifeline should be fastened to a solid support outside the vessel. At least one person should be stationed outside the vessel to observe the men inside and assist them in an emergency. A self-contained breathing apparatus should be easily and quickly accessible.

Both bulk plants and tank trucks should be fitted with an adequate number of safety devices and emergency equipment. Such items in a bulk plant should include the following:

(a) Two gas masks with canisters approved by the Bureau of Mines for ammonia service should be easily and quickly accessible and kept in enclosed cases in order to protect them against contamination and possible damage. Periodic checks on the condition of the masks and canisters should be made.

(b) Rubber aprons, tight fitting rubber gloves and gas tight goggles should be provided for all employees handling Anhydrous Ammonia.

(c) Deluge safety showers with treadle valves and bubbler type drinking fountains should be accessibly situated at all storage locations. This equipment is provided to wash away or dilute ammonia which may be accidentally spilled or splashed in the eyes, on the skin, or on clothes.

(d) Large bulk storage operations should be equipped with self-contained breathing apparatus units, stretchers and blankets.

(e) An adequate first aid kit should be provided.

(f) All employees should know the location of personal protective equipment and be trained in its use.

(g) Employees should be instructed to report ammonia leaks and should know the procedure to be followed in an emergency.

(h) It is desirable that all workers be trained in artificial respiration.

Equipment on tank trucks should include the following emergency items:

(a) U.S. Bureau of Mines approved ammonia masks.

(b) A pair of tight fitting rubber gloves.

(c) One pair of gas tight goggles.

(d) A five-gallon can of clean water.

(e) A rubber apron.

(f) Wheel chocks, emergency warning devices, and one unit of type B first aid fire protection equipment.

Applicators should be provided with the following emergency equipment:

(a) A pair of tight fitting rubber gloves.

(b) A five-gallon can of clean water.

Physiologically, ammonia causes intense irritation to the surface tissues of the eyes, nose, throat, and lungs. It should be impressed upon the worker that exposure to high concentrations of ammonia may burn, blind, strangle, and kill. Proper safety measures should therefore be observed in handling it.

The irritation of the upper respiratory tract is so rapid and violent that ammonia acts as its own warning agent. Concentrations of ammonia in air as low as 53 p.p.m. can be detected by the sharp, penetrating odor although there is some indication that the minimum amount detectable may vary with the individual.

Even though very low concentrations of ammonia can be breathed without harmful effects, higher concentrations will cause painful irritation, congestion, and swelling of the

ucous membranes of the eyes, nose, d throat. Air containing 5,000 to 0,000 p.p.m. of ammonia may cause ch intense irritation and swelling the larynx that it closes the achea (windpipe) causing sudden ath through strangulation.

The first sympton of irritation to e eyes is an immediate burning and atering. Exposure of the corneal ssue of the eyes to high concentra- ons of ammonia may cause deterio- ation of the tissue and even perman- nt blindness.

Ammonia is highly water-soluble and dissolves readily in the perspiration of the body. The effect of ammonia on the skin is that of a caustic burn, varying in severity with the concentration of ammonia and the length of time of exposure. The skin becomes red and itches intensely, and these symptons usually warn of injury to the exposed area before serious damage is done. The resistance of the skin to ammonia burns seems to vary with the individual, although in general a 2% concentration of ammonia is the maximum tolerated by the skin for more than a few seconds.

Changes in respiratory and heart ction are produced as reflex actions esulting from the irritation of the espiratory tract.

First Aid Treatment

In many cases, serious injury by mmonia can be avoided if the victim cts quickly. When any part of the ody is exposed to either liquid or aseous ammonia, wash that area ell with water at once. Remember hat the shorter the time ammonia is n contact with body tissues, the less evere the irritation or burn. The ost important precaution to take in reatment of serious ammonia in- uries is to make sure that patient is ept absolutely quiet. Slight move- ent or exertion may cause death.

The following first aid treatments re recommended:

(1) Remove the patient immediately to a place where he can breathe resh air. Place him flat on his back nd keep him warm and away from rafts. Wrap him in blankets if possible.

(2) Call a physician.

(3) If the patient is unconscious, a rone pressure or Shaeffer method of rtificial respiration is recommended. he use of a pulmotor or other mehanical means of resuscitation is azardous because it may rupture the eakened lungs. Severe lung congesion can often be avoided by the administration of pure oxygen to the atient.

(4) For nose and throat burns, niff a 2% solution of acetic acid up he nose, and rinse the mouth and hroat thoroughly with this solution. f such a solution is not available, lain water will help to alleviate the rritation. Urge the patient to drink rge quantities of water, milk, or emonade.

(5) For eye irritations, it is recmmended that generous portions of ater, 5% boric acid solution or 1% cetic acid solution, be poured over he eyeballs while the lids are held pen or introduced by means of yringe with flexible rubber tube. insing should be continued for at east fifteen minutes. If no syringe is vailable, the patient should immerse is face in a basin of water, taking are to open his eyes. After thorough on the spot" irrigation of the eyes, he victim should be sent to a phyician in order to make certain that ny damage that may have resulted o the cornea will receive adequate eatment.

(6) For skin burns, remove the amonia soaked clothing as quickly as ossible, and rinse the affected area oroughly with water. Follow this y the application of vinegar or 2% etic acid solution and further rinsing with water. Minor burns may be swabbed with diluted picric acid solution. If the burn is deep, wash it with water, and cover the area with compresses kept wet continuously with a 2% acetic acid solution or a saturated solution of sodium thiosulfate. Salves and ointments should not be applied to the skin for at least twenty-four hours following the injury.

In all cases it is important that the patient have complete rest and be kept warm. Stimulants may be given only if the patient is conscious and breathing normally.

As to other forms of "liquid nitrogen," the most common used in this area is possibly known in the trade as "No. 2 solution." Such solutions possess the combined properties of both ammonia and solid nitrogen products dissolved in water with advantages of ease of handling characteristics of low pressure solutions. Therefore, in handling subject materials all the general precautions and characteristics mentioned previously for anhydrous ammonia should be observed.

The main advantage from a safety viewpoint in handling such solutions is that we are not faced with the pressure associated with anhydrous ammonia. As to equipment, steel and iron storage facilities or piping are not satisfactory as they are subject to severe corrosion. Aluminum or stainless steel should be used exclusively and rubber hose for tank car connections. Certain forms of plastic pipe, such as "Carlon," have proven to great advantage in handling such solutions as they are noncorrosive and the problem of painting is eliminated.

Manufacturers located in the south are not subject to lower temperatures which would cause the problem or "salting-out." It should be mentioned, however, that in handling such solutions, that direct heat should not be applied to lines or tanks which have become plugged or require repairs. Tanks, lines, and valves containing solution should not be heated with an open flame before thorough cleaning to remove all salt and ammonia.

In connection with the use of electric heat devices or light bulbs to keep gauge glasses and connections warm, it is advisable to use explosion-proof electrical fittings and motors where low ventilation might permit building up of ammonia concentration of the air to within explosive limits which are about 16 to 25% ammonia.

Literature Cited

1. **Anhydrous Ammonia for Fertilizer—Z-1—Vol. VII,** Association of Casualty and Surety Company—(May 1954).
2. **NH$_3$—Ammonia—Its Uses and Properties,** Commercial Solvents Corporation—(1953).
3. **Anhydrous Ammonia—Technical Bulletin No. 101,** E. I. Du Pont de Nemours & Company, Inc.—(1952).
4. **Nitrogen Fertilizer Solutions,** Nitrogen Division, Allied Chemical and Dye Corporation—(1954).

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INSTITUTE CONVENTION

(Continued from page 1)

vague labor conditions, when all the time, the real trouble lies in—vague management.

"The best thing today for management is a greater study of man and men for nine tenths of our problems will be solved when we have learned better to—manage men.

"In a complex world which will become more so, we have mastered machines but we have not yet mastered man. We know now how to get greater production from machines but man—his thoughts and how to make him more productive — is still our great and largely unexplored new frontier.

"The study of man must necessarily begin with the man we know best—ourself. Management too often is thought of as the mere delegation of authority to others. We can, of course, delegate authority but we cannot delegate leadership. This is an art. A good leader is an artist, painting pictures on the canvases of other minds.

"Every man and woman has four canvases of the mind on which we may paint. First, that individual's desire for security. Second, his desire for recognition. Third, his desire for a sense of belonging, of being wanted. And fourth, his desire for new experiences and growth. If we are to manage men, we must take into consideration man, his age or maturity and his relationship to other men. We must realize that every man is working for a finished picture on each of his canvases with himself as the center or focal point.

"With warm, human, friendly, colorful words we apply, with brushes available to us, with light, heavy or dark strokes, the colors which will complete the masterpiece. Artistically done, these canvases will reflect the individual's dream of his tomorrow.

"Each salesman is selling a dream of tomorrow. The housewife dreams of the delight and ease of working in a new kitchen filled with the latest electrical appliances. The head of the house dreams of the day when his house will be paid for, the children educated and he and mother can take the trips they have planned. The merchants we call on dream of a new, fast-moving line with a larger profit for their business."

Mr. Fouche said that "each salesman sells not products, but ideas," and "when we have a shortage of ideas, we have a surplus of products.

"In America, as nowhere else in the world, the salesman reigns supreme. He keeps the goods moving—which keeps the factories running. Salesmen are the advance agents of modern civilization."

Paul C. Johnson, editor of Prairie Farmer, Chicago and R. J. McGinnis, editor of the Farm Quarterly, Cincinnati, were presented awards for "superior journalistic contributions toward the building of the soils of our nation" by the National Plant Food Institute.

Mr. Johnson and Mr. McGinnis were winners in the Institute's nationwide "Soil Builders Award for Editors" contest in a field of forty farm magazine entries. The contest was established in 1952, with the approval of the American Agricultural Editors' Assn. The presentation of the awards was made by Louis H. Wilson, secretary and director of information of the Institute, as a feature of the convention.

Judges for the contest were six nationally-known leaders in the fields of agriculture and business. They are: Nolen J. Fuqua, president, the National Association of Soil Conservation Districts, Duncan, Okla.; Roger Fleming, secretary-treasurer, American Farm Bureau Federation, Washington, D.C.; Wesley Hardenbergh, president, American Meat Institute, Chicago; Herschel D. Newsom, master, the National Grange, Washington, D.C.; Robert Howey, president, National Vocational Agricultural Teachers' Assn., Inc., Sycamore, Ill.; and Fletcher Farrington, president, National Association County Agricultural Agents, Dadeville, Ala.

Scrolls signed by the national judges were awarded Mr. Johnson, representing the winner among magazines of more than 300,000 circulation and to Mr. McGinnis, representing magazines of less than 300,000 circulation. The farm magazines entered in the contest represented a total readership exceeding 30,000,000.

Features judged included stories, editorials, illustrations and combinations of the three categories. The winning staff writer or staff member designated by the editor of the winning magazines will receive a plaque at the winter meeting of the American Agricultural Editors' Assn. in Chicago.

Mr. Johnson became editor of Prairie Farmer in 1947, after serving as extension editor of the Institute of Agriculture, University of Minnesota, from 1940 to 1947. He was born on a dairy farm in Minnesota in 1904 and was graduated from St. Olaf College in Minnesota, with an A.B. degree in 1928. His alma mater, in 1953, awarded him an honorary doctor of humane letters degree. Previously, he was a country newspaper editor, from 1930 to 1940, last serving as editor of the Worthington (Minn.) Daily Globe.

He was awarded the American Farmers degree by the Future Farmers of America, in 1952; received the Reuben Brigham Award for meritorious service to agriculture, presented by the American Association of Agricultural College Editors, in 1954; was president of the American Agricultural Editors' Assn., 1952-1953; served as president of the American Country Life Assn., 1954-1955; and was awarded the Distinguished Service Medal of the National 4-H Club Camp, in 1953.

Mr. McGinnis was born in Columbus, Ohio, in 1898 and entered Miami University, Oxford, Ohio, after finishing high school. He joined the French Foreign Legion in 1915 and was transferred to the U.S. army in 1918 with the rank of captain. While in service, he was awarded the Croix de Guerre and Medialle Militaire.

Returning to Miami University, he was graduated in 1921 with an A.B. degree. He also earned an M.A. degree from Ohio State University and a diploma from Sorbonne University, Paris, France.

He did newspaper work with the Associated Press in South America, Europe and Africa until 1932. Mr. McGinnis was head of the journalistic department and director of publications at Miami University, 1932-1941 and also served in the U.S. army, 1941-1945. He was co-founder of the Farm Quarterly and has been editor-in-chief, since 1946.

John Ott, president of John Ott Pictures, Inc., Winnetka, Ill., a nationally-known authority on time-lapse photography, showed Institute members and guests exclusive time-lapse films on the growth of plants showing comparative results of proper feeding.

Through the eyes of the time-lapse camera, the audience actually saw underground pictures of the plant roots as they were growing and reaching out for plant food. One graphic scene showed the roots actually coming into contact with plant food. Another of the most dramatic scenes showed the growth response of a plant suffering from an extreme chloratic condition, when treated with one of the new chelated iron formulas.

Mr. Ott's film presentations were selected from a number of his different films and included "shots" of his new time-lapse air-conditioned greenhouse made of plastic which permits more of the sun's rays to penetrate than will pass through glass.

His films included new microscopic subjects, such as cell division and growth, development of pollen tubes, streaming of the protoplasm within the cells of a leaf and actual fertilization taking place of a plant that reproduces by means of real eggs rather than seeds.

At a showing June 11, especially for ladies attending the convention, Mr. Ott showed a series of his time-lapse pictures recently used by RCA and the National Broadcasting Co. on closed color television circuits.

Some of the pictures shown currently are being edited into Walt Disney's new feature, "Secrets of Life," which will have its premiere showing next fall. Many of the films shown will be used on the Disneyland Program of Sept. 26, when Mr. Disney will pay tribute to John Ott and his time-lapse photography.

The program for the ladies included pictures of many colorful flowers such as the bird of paradise, some of the newest varieties of rare camellias from the Yunnan Province of China and pictures of many rare and unusual orchids from all over the world.

In a talk on "Our Nation's Role in World Tension," Sen. J. W. Fulbright (D., Ark.), chairman of the Senate Committee on Banking and Currency, said that this nation has made too little progress in the fields of ideas and human relations in our foreign activities.

He said that 50 years ago there was no real challenge to the validity of the concept of democracy, but that today the Communists attack the soundness of the democratic idea.

Also, 50 years ago the world was dominated by western European nations along with the U.S., but now there has been an almost utter collapse of the influence of the western European nations, he said.

Today, more than half the world is undernourished, afflicted with disease, in poverty and illiterate, Sen. Fulbright declared. A change now is underway in these areas toward some form of modern industrial society. The big question is, whether or not the change will be along democratic lines or toward an authoritative system. In the long run, this question is basic to our survival, the senator said.

He told the Institute that the purpose of foreign economic aid should be to create conditions that will help these countries develop along democratic lines. He said that he felt the current foreign aid bill put too much stress on military aid, not enough on economic help.

Our big aim should be to try to help these countries become successes as self-governing units, and it is not real important whether or not "they love us," Sen. Fulbright said.

The June 12 morning session also included a premier showing of "What's in the Bag!" a new Institute movie. Hugo Riemer, Allied Chemical & Dye Corp., New York, chairman of the Memorial Committee, presented a memorial resolution honoring those members who died during the past year.

E. A. Geohagen, the Southern Cotton Oil Co., New Orleans, chairman of the board of the Institute, presided at both the June 11 and June 12 sessions.

CONVENTION COVERAGE

Coverage of the National Plant Food Institute convention in this issue is by the following Croplife staff members: Lawrence A. Long, W. E. Lingren and Donald Neth, all of Minneapolis, and Paul L. Dittemore of New York.

OFFICERS

(Continued from page 1)

man, executive vice presidents; W. R. Allstetter, vice president; Louis H. Wilson, secretary, and William S. Ritnour, treasurer.

Thirteen new members of the board of directors were elected at the annual business meeting. They are:

W. G. Hewitt, Pacific Guano Co., Berkeley, Cal.; H. A. Parker, Sylacauga (Ala.) Fertilizer Co.; Walter E. Meeken, Consolidated Rendering Co., Boston; Frank G. Washburn, American Cyanamid Co., New York; S. M. Hackett, Dixie Fertilizer Co., Shreveport, La.; A. F. Reed, Lion Oil Co., Division of Monsanto Chemical Co., El Dorado, Ark.; L. Dudley George, Richmond (Va.) Guano Co.; H. E. Wood, the Farmers Fertilizer Co., Columbus, Ohio; P. J. Gum, Ridge Fertilizer Co., Lake Wales, Fla.; B. W. Bellinger, Tennessee Corp., New York; Dean R. Gidney, U. S. Potash Co., New York; J. E. Nunnally, Cotton Producers Assn., Atlanta, and G. F. Coope, Potash Co. of America, Carlsbad, N.M., who was elected to fill the unexpired term of George E. Petitt of the same company, deceased.

Elected as members of the executive committee were E. A. Geohagen, Southern Cotton Oil Co., New Orleans; W. E. Shelburne, Armour Fertilizer Works, Atlanta; John A. Miller, Price Chemical Co., Louisville; Mr. Coope; Hugo Riemer, Nitrogen Division, Allied Chemical & Dye Corp., New York; Marlin C. Geiger, Davison Chemical Co., Division of W. R. Grace & Co., Baltimore, and J. H. Epting, Epting Distributing Co., Leesville, S.C.

Mr. Pate and Mr. Prindeville are members of the executive committee.

Joseph A. Howell Cited in Resolution By Institute Directors

WHITE SULPHUR SPRINGS, W. VA.—The board of directors of the National Plant Food Institute, in a meeting during the annual convention of the association here, passed the following resolution:

"Whereas the National Plant Food Institute is now concluding the first year of its operations following its organization by the consolidation of the National Fertilizer Assn., Inc., and the American Plant Food Council, Inc., and

"Whereas Joseph A. Howell has exercised a role of prominent leadership both in uniting the fertilizer industry under its one national trade association, the National Plant Food Institute, and in resolving the many organizational problems encountered during the first year of operation by serving as its first president, and

"Whereas the forceful leadership and unfailing efforts of Joseph A. Howell during this period of organization and initial operations has contributed substantially to the betterment of both the fertilizer industry and its trade association, the National Plant Food Institute,

"Therefore be it resolved that we, the undersigned members of the first board of directors of the National Plant Food Institute, both upon behalf of ourselves and the members of the Institute, wish to express our appreciation and commendation for the many services, contributions and the outstanding leadership provided by Joseph A. Howell during his term as first president of the Institute."

The resolution was signed by all of the directors of the Institute who were at the annual convention.

PENTA TREATMENT

JOPLIN, MO.—The Long-Bell Lumber Co., which a year ago first began treating wood with pentachlorophenol in a cylinder at DeRidder, La., recently converted another pressure-treating cylinder to penta here.

Georgia Fertilizer Conferences Set for July 10, 11, 13

ATLANTA—The July dates for district extension fertilizer dealer-manufacturer conferences have been announced by the Georgia Plant Food Educational Society, Inc.

The northwest district conference will be July 10 at the Griffin experiment station; July 11 for the northeast district at the Athens station and July 13 for the southeast and southwest districts at the Tifton station.

The conferences will begin at 10 a.m. with tours of experiment stations. At 1:30 p.m. the vice president of the society for the district conferred will open the afternoon programs. The vice presidents in charge will be L. Ralph Boynton at Griffin, D. D. Temple at Athens and John Porter at Tifton.

Topics and speakers scheduled for the program are: "Progress in Fertilizer Recommendations," J. R. Johnson, Ralph Wehunt, Jim Bergeaux, extension agronomists; "Fertilizer Potential Created by Research," George King, director, Georgia experiment stations; "New System of Grade Reporting in Georgia," Paul Colley, chief, fertilizer division, Georgia State Department of Agriculture; and forum—questions and answers, W. Eberhardt, Jr., assistant director, agricultural extension service.

The conferences are sponsored jointly by the agricultural extension service, the University of Georgia College of agriculture and the Georgia Plant Food Educational Society. President of the society is J. E. Nunnally and secretary-treasurer is J. Fielding Reed.

Fertilizer Safety Executive Group Meets

ROANOKE, VA.—The executive committee of the fertilizer section, National Safety Council, met at the Roanoke Hotel here June 10 to hear reports of sub-committee chairmen and to discuss problems of the industry. In charge of the meeting was Curtis A. Cox, Virginia-Carolina Chemical Corp., Richmond, Va., national chairman of the fertilizer safety section.

Program plans were discussed for the annual meeting of the fertilizer section, scheduled to be held at the La Salle Hotel, Chicago, Oct. 22-23, and a plea was made for special efforts to gain new members for the section.

Some 22 committee members were present for the meeting. The next session will be called at the discretion of Mr. Cox, probably in connection with the October meeting in Chicago.

Diamond Black Leaf Makes Personnel Shifts

DES MOINES, IOWA—Emil C. Gerdes, midwest manager of the Diamond Black Leaf Co., 3525 Vandalia Road, Des Moines, Iowa, has announced five changes in sales personnel for his company.

George A. Lawrence, Des Moines, has been appointed as supervisor of milk sales of agricultural chemicals in the midwest and Richard Decker has been appointed sales supervisor of the house and garden program in the midwest. Mr. Decker was formerly at the San Jose, Cal., plant.

Richard H. Gerdes, who developed the house and garden sales program in the midwest territory, has been transferred to San Jose, to assist in the program there.

Noel McDonald has been appointed Illinois sales representative and will move from Des Moines to Chicago. Louis E. Thomas has been appointed sales representative for Kansas and Missouri at Bethel, Kansas.

NPFI FIRST YEAR

(Continued from page 1)

for an even better selling job in the years ahead.

"We are more than a billion dollar industry," the statement said. "Each year we are spending a little more than a half-million dollars for promotion—to tell our story, to conduct our programs with the land-grant colleges and our work with many other organizations, agencies and media that have farmers as their customers.

"In the years ahead, we will find it necessary to expand our Institute programs, projects and services if we are to meet new competitive conditions. When plant food is the farmers' best buy—when plant food is recognized as one of the most important tools for lowering the unit cost of production—we cannot retrench."

With the help of slides, Dr. Coleman reviewed the many areas of work and service in which the Institute is active. In the field of legislation he said that last year there were 15 bills in the national congress and 14 in state legislatures that affected the industry. He also mentioned the Institute's work during the proposal to raise rail freight rates.

Other areas of Institute activities that were described by Dr. Coleman are:

Work with other groups such as the National Safety Council, control officials, agricultural editors and others.

Work in individual states to promote better farming.

Activities with agricultural institutions, particularly the land grant colleges.

Work with bankers.

Teaching aids, books and pamphlets and Institute publications such as Plant Food Review and Weekly News Report.

Institute films. Currently, Dr. Coleman reported, there are seven in distribution and last year they were shown to more than 300,000 persons.

News releases to publications and a farm radio news service going to more than 1,000 stations.

Dr. Coleman noted that land-grant colleges say that farmers should be using two or three times as much as they now are using. As a tool for farmers to lower their unit costs of production and thus make more money even in a declining farm market, fertilizer has a great potential in the coming years, he said.

FIELD DAY

BEEVILLE, TEXAS—The Beeville Experiment Station field day will be held here June 29.

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The regional circulation of this issue is concentrated in the Southern states.

Attending Conventions and Reading—Key to Knowledge

Trade association meetings like the one just held by the National Plant Food Institute at the Greenbrier Hotel, offer a veritable education in knowledge of the industry to those with receptive minds. We doubt that anyone could have gone to the Institute's convention desiring information that he could use in his business, and come away disappointed.

The same is of course true of other association meetings in all segments of the agricultural chemical industry . . . the person who sincerely seeks information about his trade can certainly find it through attendance at the convention sessions and in chatting with fellow-businessmen.

Yet, despite the wealth of information available at such meetings, we have heard remarks such as "I don't have time to go to conventions." Or, we have heard people registered at the convention comment that "I don't attend the sessions. I just go to see people." This latter statement reveals doubt in that person's mind whether the whole thing is worth while.

In a similar manner there are those who say, "I don't have time to read anything." A recent example was cited to us of a couple of men, quite prominent in the trade, who were seeking information on a certain development. Someone told them that exactly what they wanted to know had been published in Croplife, and expressed surprise that they hadn't seen it. "Oh, we have been too busy to read anything," they replied. Yet they had spent far more time trying to find the information they wanted than it would have taken them to read their trade paper.

Perhaps there isn't anything that can be done to change the habits of such people. Fortunately, they are in a distinct minority, but those comparatively few are handicapping themselves by trying to do it the hard way when it comes to keeping up with the changing times.

The May issue of Machinery, of which Charles O. Herb is editor, contains some excellent comments on this problem. "Most of the knowledge that anyone possesses has been imparted to him by others, either through the medium of the printed page or by word of mouth and actual demonstration," it points out. "One's own discoveries in a particular line of endeavor are generally founded on knowledge accumulated from the recorded experiences of past and present experts in the same field.

"Life is too short for mathematicians to discover for themselves principles that have been accepted since the days of Pythagoras or Euclid—or for inventors to question the effectiveness of the screw, which has been well known since Archimedes—or for philosophers to spend hours on end evolving ideas promulgated in the days of Socrates.

"No one can hope to get ahead in his chosen line of work unless he keeps abreast of the developments in his field. There is only one way to do that effectively, and that is by reading the technical or trade magazines and textbooks that cover the particular phase of industry or business in which the individual is engaged. Dependence upon hearsay or casual references is wholly inadequate.

"Some people say that they have no time to read the magazines and text-books of their trade or profession. Yet, the time available now for recreation is vastly greater than that of our ancestors who worked 10 to 12 hours a day and six days a week. True, there are many more forms of diversion today, such as golf, moving pictures, and television to distract people. But if some of the time ordinarily spent in recreation were devoted to study, in order to increase the capacity to earn a livelihood, it would surely pay large dividends.

"While a college education has been available to many more people in recent years than in earlier days, those who have not had the opportunity for advanced formal education need not lack instruction in any line. History books are full of Lincolns, Edisons, and Fords who made good in spectacular fashion because they educated themselves. But such records are not only of the past. There are many leading men in public life and industry today who attained their high positions through self-education.

"Anyone who does not take time out of his day to improve his professional knowledge by reading is as shortsighted as the woodsman who does not periodically sharpen his axe. No time to read? No one can afford not to read! In the words of Sir Francis Bacon, 'Reading Maketh the Full Man'."

Pasture Fertilization Offers Sales Opportunity

Sometimes in the course of talking up fertilizer sales, it is difficult to stand far enough away from the problems at hand to get a good perspective on what the total picture is. Occasionally one gets a fresh viewpoint which serves to charge the selling batteries and presents an opportunity to stress new angles in selling.

George Sharpe, extension soil conservationist at West Virginia University made some pertinent observations recently, based on a conversation he heard between two farmers who were talking about the effect the weather was having on their pastures. One farmer remarked that he couldn't remember when he had turned his cattle out so late. The other had bought hay to keep his livestock off his pastures, but finally had to turn them out because he ran out of money to buy more hay. The first farmer said that he didn't have grass enough, because it just wasn't growing. The weather was getting the blame.

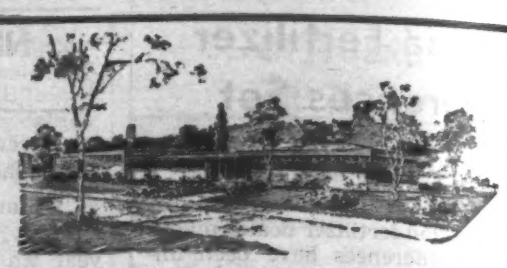
"Since then, I have had a chance to see some pastures," Mr. Sharpe comments. "Some of these fields shouldn't have the word 'pasture' attached to them, because there certainly wasn't much to eat. 'Pasture,' according to Webster, is (1) Grass or other plants grown for feeding grazing animals; (2) To feed on growing grass; graze.

"On the other hand, I saw a pasture or two that had been treated with fertilizer. These pastures were able to carry the livestock turned in on them and still have some feed left over. One pasture provided an interesting demonstration. The farmer had run out of fertilizer on one side of the field. The grass in this area just wasn't growing.

"On a 'Greener Hills' tour of Barbour County recently, I saw two good examples of how nitrogen makes the grass grow. Certainly, the two farmers who were blaming the weather for the condition of their pastures could have learned a lot from that tour.

"I have been told by some farmers that they couldn't afford to buy fertilizer to treat their pasture. Yet, they bought hay. Chances are they will have to buy more hay next year or sell some of their livestock. Is it cheaper to buy fertilizer for the pastures or continue to buy hay?"

A dollar spent for fertilizer is never wasted, and is cheaper than buying hay next winter. This is a good point to stress to the farmer who is reluctant to purchase fertilizer for his pasture land. If he can manage to dig up cash to buy hay later in the season, he should certainly be willing to invest in plant food which will probably save him money during the year and at the same time improve his land.



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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MEETING MEMOS

une 26-28, Pacific Branch, Entomological Society of America, Hotel Claremont, Berkeley, Cal.

une 28-30—Association of Southern Feed & Fertilizer Control Officials, 14th Annual Convention, Hotel Roanoke, Roanoke, Va.; Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., secretary-treasurer.

une 28-30—Seventh Regional Fertilizer Conference of the Pacific Northwest, Chinook Hotel, Yakima, Wash.

une 30—Del-Mar-Va Peninsula Fertilizer Assn., 35th Annual Convention, Hotel George Washington, Ocean City, Md., F. N. Strudwick, P.O. Box 199, Salisbury, Md., Secretary.

uly 12—South Carolina Fertilizer Meeting, Tour of Edisto Experiment Station, Blackville, S.C.

uly 19-20—Southwestern Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

uly 25-27—Northwest Association of Horticulturists, Entomologists and Plant Pathologists Conference, Northwest Washington Experiment Station, Mount Vernon, Wash.

ug. 1—Kentucky Fertilizer Conference, Guignol Theatre, University of Kentucky, Lexington, Ky.

ug. 2-3—Nitrogen Field Day and Equipment Demonstration, Ohio State University, Columbus, Ohio.

ug. 14-15—Ohio Pesticide Institute, Summer Meeting, Ohio Agricultural Experiment Station, Wooster, Ohio, J. D. Wilson, Wooster, Ohio, Secretary.

ug. 17-25—Tenth International Congress of Entomology, McGill University and University of Montreal, Montreal, Canada, J. A. Downes, Science Service Bldg., Carling Ave., Ottawa, Ontario, Canada, Congress Secretary.

ug. 22-24—Beltwide Cotton Mechanization Conference, Atlanta Biltmore, Atlanta, Ga., sponsored by National Cotton Council.

ug. 30—South Carolina Plant Food Educational Society, Clemson House, Clemson, S.C.

ept. 5-7 — National Agricultural Chemicals Assn., 23rd Annual Meeting, Essex and Sussex, Spring Lake, N.J., L. S. Hitchner, 1145 19th St. N.W., Washington, D.C., Executive Secretary.

ct. 15 — Fifth Annual Chemical Sales Clinic, Hotel Commodore, New York, Sponsored by the Salesmen's Association of the American Chemical Industry.

ct. 15 — Fifth Annual Chemical Sales Clinic, the Salesmen's Association of the American Chemical Industry; Hotel Commodore, New York City; chairman, Preston F. Tinsley, Westvaco Chlor-Alkali Division, Food Machinery and Chemical Corp., 161 East 42nd St., New York 17, N.Y.

ct. 16-17—National Nitrogen Solutions Assn., Annual Meeting and Trade Show, City Auditorium, Sioux City, Iowa; John White, Auburn, Neb., secretary.

t. 18-19—Association of American Fertilizer Control Officials, Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Clemson Agricultural College, Clemson, S.C., secretary-treasurer.

t. 23-24—Pacific Northwest Garden Supply Trade Show, Shrine Auditorium, Portland, Ore.

v. 2—Joint Agronomy-Industry Work Conference, Atlanta Biltmore Hotel, Atlanta, Ga.

v. 7-9—Agricultural Ammonia Institute, Annual Convention, Atlanta Biltmore Hotel, Atlanta, Ga., Jack F. Criswell, Claridge Hotel, Memphis, executive vice president.

Nov. 11-13 — California Fertilizer Assn., 33rd annual convention, Del Coronado Hotel, Coronado, Cal.; Sidney H. Bierly, executive secretary, 475 Huntington Drive, San Marino 9, Cal.

Nov. 19-20 — Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., secretary.

Nov. 28—Oklahoma Fertilizer Dealers Conference, Sponsored by the Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater.

Nov. 29—Oklahoma Soils and Crops Conference, Oklahoma A&M College, Stillwater.

Dec. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

Oct. 16-18—Fertilizer Industry Round Table, Shoreham Hotel, Washington, D.C. Vincent Sauchelli, Chief Agronomist, Davison Chemical Co., Div. W. R. Grace Co., Baltimore 3, Md., chairman.

Advantageous Use of Granular Type DDT For Borers Predicted

AMES, IOWA—The development of granular-type DDT and suitable machines for its application is expected to materially boost the total corn acreage which will be treated for corn borers in Iowa this year. That's assuming, of course, that this year's infestation and growing conditions are similar to those of the past few years.

Iowa State College agricultural engineers and entomologists made this prediction at the fifth annual agricultural engineering field day—held here.

Farmers from all parts of Iowa attended the meeting and heard reports of experimental studies and saw a demonstration of granular insecticides applied by airplane. Representatives of farm equipment manufacturing companies also exhibited new machines which have been developed for ground application of the insecticide.

The college specialists cited these advantages which granular insecticides have over DDT emulsion spraying:

No water is required. There's nothing to mix. About four times as much acreage can be treated with a given pay load of granules as with an equal weight of spray.

While time of application is important with DDT granules, it is probably not as critical as with DDT sprays. The granules fall into the whorl leaves and remain nearer the point of feeding for a longer time.

Treatment for the first brood of borers should begin as soon as 75% of the plants show evidence of feeding damage in the whorl leaves. For control of second brood borers treatment is recommended at the first egg hatch if there are 100 egg masses present per 100 plants.

Application should be made at the rate of 15 to 20 lb. per acre with ground equipment; 20 to 25 lb. per acre by airplane. Granules should be applied in a band at least 12 in. wide at a height of 8 to 10 in., college spokesmen said.

In 1955 test trials, the estimated saving in yield in five experiments ranged from 7.1 to 11.9 bu. per acre. Assuming that it cost the equivalent of 2 bu. of corn per acre to treat for borers, the yield increase in any of the tests allowed a comfortable margin of profit as a result of treatment, the specialists pointed out.

Farmers using granules for the first time were advised to leave untreated tests strips in their field to serve as a means of measuring the effectiveness of the insecticide.

Chemical Companies Win Safety Awards

WHITE SULPHUR SPRINGS, W.VA.—Two chemical companies were presented with the Lammot du Pont safety awards here recently at the annual meeting of the Manufacturing Chemists' Assn. The awards are made annually to the chemical companies showing the greatest improvement in plant safety over a five-year period.

The winner among those companies whose employees worked more than 2 million man-hours annually was Pittsburgh Coke & Chemical Co., Pittsburgh. Among firms whose workers put in 2 million man-hours or less annually, the award was presented to Oronite Chemical Co., San Francisco.

Stauffer Chemical Co., New York, was runner-up for the second consecutive year in the over 2 million man-hour category and Heyden Chemical Corp., New York, was runner-up in the under 2 million man-hour classification.

CASH EXPANDS AT DECATUR

DECATUR, ILL.—A. W. Cash Co., manufacturer of automatic pressure reducing and regulating valves and combustion control equipment and temperature regulators, has opened new offices at 115-117 So. Main St., Decatur, Ill. Former office space at 18th and Eldorado Sts., Decatur, has been converted to manufacturing facilities.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $9 per column inch.

All Want Ads cash with order.

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WE HAVE ONE RECONDITIONED HOUGH Payloader, it is repainted and completely overhauled and in good condition. Inquire Box 362, Marysville, Kansas.

SITUATIONS WANTED

FERTILIZER MAN WITH NINE YEARS' experience as plant superintendent and six years as general manager fertilizer operations, plus chemical and physical knowledge of fertilizer and materials, seeks managership of aggressive fertilizer operation, preferably eight to ten thousand ton capacity, with possibilities of expansion. Address Ad No. 1810, Croplife, P. O. Box 67, Minneapolis 1, Minn.

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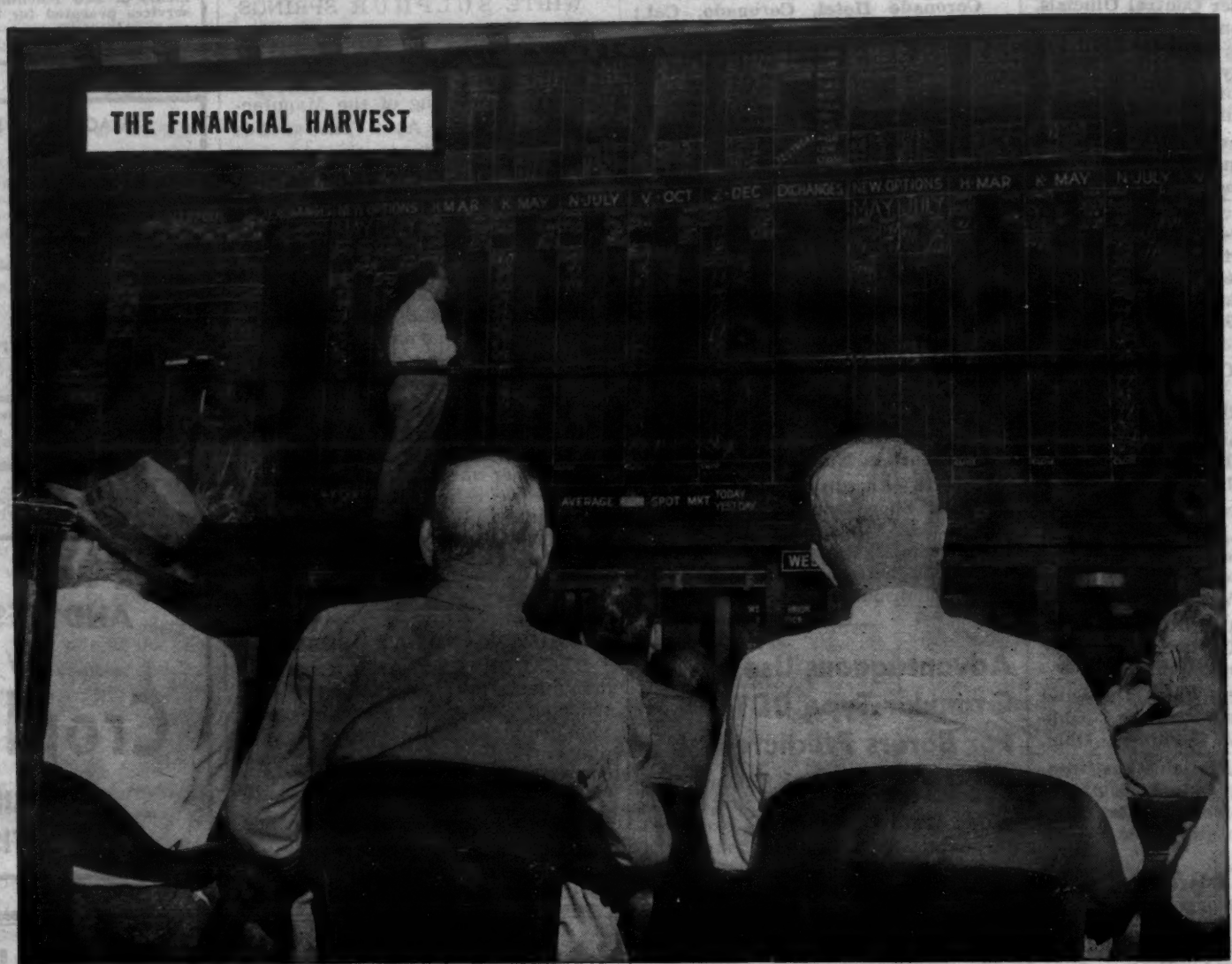

YOU CAN'T SELL COTTON THAT THE INSECTS GOT!

These men are in business to buy your cotton. But farmers can't sell them the cotton that insects destroyed. That's why leading cotton growers everywhere make a regular, thorough insect control program one of the key factors in producing a maximum yield per acre.

When it comes to selecting an insecticide for their program, leading growers naturally want the most for their money. That's why so many of them rely on toxaphene dusts or sprays.

Carefully kept records of growers all over the Cotton Belt show that toxaphene insecticides have helped them make consistently high yields per acre. Toxaphene insecticides can be used in early, mid, or late season and in most cases toxaphene alone is sufficient to control all the insects that may infest your fields.

If you grow cotton, it's just good business to look at an insect control program as an investment. The pay-off will come at picking time. For a complete, all-season program specify toxaphene for easy, efficient and economical control. Toxaphene dusts or sprays will keep your insect losses to the minimum, and your profits at a maximum.

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